

DEPARTMENT OF THE INTERIOR
BUREAU OF EDUCATION

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BIBLIOGRAPHY OF
SECONDARY EDUCATION RESEARCH
1920-1925

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A Report of the National Committee
on Research in Secondary Education



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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,

Washington, D. C., February 3, 1926.

SIR: This bulletin is the first of a cooperative research series sponsored by the National Committee on Research in Secondary Education. This committee represents the important national and regional organizations concerned wholly or in part with secondary education. It includes in its personnel many of the recognized leaders in secondary education in the United States. The Bureau of Education feels that, in lending its facilities to this committee for research, it is insuring itself that reports carried to the public through its publications will prove a safe guide for the formulation of standards and policies of secondary education.

JNO. J. TIGERT,
Commissioner.

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The SECRETARY OF THE INTERIOR.

FOREWORD

This bibliography is offered to those working in the field of secondary education. It will prove helpful primarily to high-school principals, professors of secondary education, graduate students majoring in secondary education, and workers in research bureaus who deal in part with secondary education.

It includes research studies contributed during the period 1920-1925. The sources of the bibliography are educational periodicals, published bulletins and monographs, books and theses on secondary education. The bulk of the material included is research based on a statistical method. Very little research involving other than a statistical method is included for two reasons: (1) Analysis not based upon statistical materials so frequently merges into a mere statement of opinion that to distinguish between what is properly research and what is mere discussion is difficult and involves examination of great masses of material. (2) Such analysis, when properly classified as research, usually is based upon studies that make use of a statistical method and draw their data from primary sources.

The chief studies that are listed which do not use a statistical method will be found among the theses of graduate students.

The theses listed in this bibliography were listed from bibliographies furnished by various institutions. Not having access to these theses the lists have been used in the form supplied by the various institutions.

Because this bibliography has been compiled from contributions from several different sources it lacks uniformity in notation. Where material could be examined by the specialists in the Bureau of Education who participated in the undertaking an attempt in the notations to state sources of data, general character of data, and general conclusions reached was made. Bulky reports, however, do not easily lend themselves to such treatment without using a prohibitive amount of space. These considerations are responsible for a lack of uniformity of style of notation for studies that were examined by workers in the Bureau of Education.

The compilers are indebted to various research bureaus, universities, and State departments of education for material contributed. Appreciation for criticism and additions to the bibliography by members of the executive committee of the National Committee on Research in Secondary Education is here expressed.

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BIBLIOGRAPHY OF SECONDARY EDUCATION RESEARCH, 1920-1925

ADMINISTRATION

MARKS AND MARKING

Eaton, Harold T. A study of school marks. *Education*, 43: 620-28, June, 1923.

A study of the distribution of school marks by subjects in Syracuse high schools.

Feingold, Gustave A. Commutation of I. Q's. into percentage grades corresponding to those commonly used in marking scholarship. *Educational administration and supervision*, 11: 251-63, April, 1925.

Criticism: Percival M. Symonds, p. 264.

Conversion of I. Q's. into terms which foretell the kind of scholarship marks pupils might reasonably be expected to receive. Examination of 660 pupils in grammar school and 1,070 upper eighth-grade pupils. Proposes a multiple scholarship intelligence scale. Percival M. Symonds criticizes the suggestion to use the percentage system and I. Q. as a basis for marking in high school.

— Correlation between intelligence and scholarship. *School review*, 32: 455-67, June, 1921.

Finds correlation between recitation marks and examination marks higher than between intelligence and examination marks.

Lindsay, E. E. Personal judgments. *Journal of educational psychology*, 12: 413-15, October, 1921.

A study to compare teachers' estimates with tests (Binet). Twelve girls and seven boys in tenth-grade history. Teachers' estimates are significant but to no marked degree. Teachers' training and experience do not affect significance. Individual judgments differ widely.

Lindsay, Mary D., and Gamsby, Ruth B. Where test scores and teachers' marks disagree. *School review*, 29: 679-87, November, 1921.

A study of students of the Palo Alto union high school, November, 1920, given the Terman group test and graded by the teachers in charge. Of 46 chosen cases, 26 showed more ability in the test than their school work indicated, while the school marks of 10 were higher than the test score in any case would predict. Mental tests have proved their value in the school and teachers will continue to use them.

Odell, Charles W. High-school marking systems. *School review*, 33: 346-54, May, 1925.

The marking system as used in 281 Illinois high schools.

Sharp, L. A. A study of school marks. *Peabody journal of education*, 1: 207-14, January, 1924.

A study of marks by 40 teachers in Knoxville, Tenn., high school involving 5,978 subject marks. Distributions of marks are given by teachers. Subjects and years are analyzed and percentage distribution of marks by sex of pupils.

Shriner, W. O. Reliability of teachers' marks. *Mathematics teacher*, 1924.

Willard, Dudley W., and Williams, Curtis T. A criterion of the quality of teaching. *Educational administration and supervision*, 9: 147-59, March, 1923.

The study is based on data from a mental survey of 236 high-school pupils of Kent, Wash. Terman group tests, forms A and B, were used, seven and one-third months apart. Concludes that through comparison of scholastic marks with test scores teaching can be evaluated.

Winner, Harry Ellsworth. The system of grading in the high schools of Pittsburgh and a study of the distribution of marks in the South Hills high school. Master's thesis, University of Wisconsin. 1921.

MISCELLANEOUS

Barton, J. Wesley. School organization on an objective basis. *Educational administration and supervision*, 6: 187-97, April, 1920.

An investigation concerned with analysis of some of the factors responsible for retardation. Data on 226 pupils from grades 1 to 12 in a single school. Tests used: Pyle's opposites, and Kansas silent reading test. Fifty per cent of retardation was not justified by the mental abilities and school attainments revealed by the tests. The tests, scales, and other objective standards might serve as adequate criteria in grading pupils, and in establishing standards for both teachers and pupils.

Brinkmeier, Ina Hill. A study of disciplinary methods in high schools. Master's thesis, University of California. May, 1923.

Cook, Harris M. How does the organization of high schools in Mississippi, approved for less than four years' work, compare with the organization of high schools approved for four years' work? Master's thesis, George Peabody college for teachers. 1923.

The data for this study are taken from the report of principals to the state superintendent. The subject suggests the study.

Cornick, Homer Henry. Use of the high-school plant: a study of the East Bay high schools. Master's thesis, University of California. May, 1922.

Dawson, Charles D. A special study on the so-called school fads for 1922-23. Detroit bureau of educational research.

Reproduces the questionnaire used in a study of "school fads" and analyzes returns from 36 superintendents in cities from 100,00 to 250,000 population. The study is concerned with practices in providing special schools for exceptional pupils, activities in the regular schools other than academic, and provision in school budgets for extraclass activities of specified type.

Douglas, Earl B. Possibilities in the six-year high school for the small town. *Educational administration and supervision*, 9: 39-51, January, 1923.

Describes the organization, housing, teaching force, and assignments, materials of instruction, methods of supervising student effort, socialization and provision for individual differences in the University of Oregon high school.

May, Agnes Dexter. The administration of a physical education program for girls in high schools not having gymnasiums, and an evaluation of a plan in use in Piedmont high school. Master's thesis, University of California. May, 1923.

Neilson, Neils Peter. Administration of physical education in large high schools of California. Master's thesis, University of California. 1922.

Phelps, Shelton. The administration of county high schools in the South. George Peabody college for teachers. Contributions to education no. 6.

The major problem which this dissertation raises is: Does the county as a unit of administration in secondary education possess certain characteristics which render it a desirable unit through which to administer the high schools of the country? The study seems to point to the county as the best administrative unit for high schools of the country but discovers that some school publicity is needed to convince the public of the wisdom of these findings.

Reavis, William C. The administration of failing pupils in the high schools of Seattle, Wash. School review, 33: 28-34, January, 1925.

To temporize indefinitely with failing pupils, after diagnosis and corrective measures have failed, creates an educational situation which is a detriment both to the individuals concerned and to the school as a whole. To continue to offer instruction to failing pupils is a moral and economic waste.

Sherrod, Charles C. Some administrative practices in the municipal high schools of Tennessee. Master's thesis, George Peabody college for teachers. 1921.

This study points out the typical high school in the cities and incorporated towns of Tennessee with regard to practices in (1) buildings and equipment; (2) organization; (3) courses of study; (4) teaching staff; and (5) student organization.

Tielking, Norma L. Credit for extra work and out-of-school work in Indiana high schools. Master's thesis, Indiana university. 1923.

Vanderbie, Chauncey Learen. An administrative and supervisory study of the Watertown, Wis., high school. Master's thesis, University of Wisconsin. 1924.

Weaver, H. B. Should there be honor students at high-school graduation? School review, 32: 529-33, September, 1924.

Offers a survey of practice and opinion concerning the selection of honor students in high schools. Finds a prevailing practice of naming honor students.

PUPIL GROUPING

Allen, Richard D. Some neglected problems in classifying high-school pupils. Journal of educational research, 11: 351-358, May, 1925.

A plea for making use of educational intelligence tests for individual guidance as well as classification.

Almack, John C., and Almack, James L. Administration problems connected with gifted children. Educational administration and supervision, 8: 129-36, March, 1922.

A study of superior students, juniors and seniors, in high schools of Eugene, Oreg. Fifty-one students selected out of 726. Army alpha administered, followed by Otis group test. Standard correlation between Army alpha and Otis was 0.765 (boys) and 0.659 (girls). Eight per cent of grades 7 to 12 were found superior. Concludes that it is easier to discover these individuals than to make satisfactory provisions for them.

Armentrout, W. D. Grouping pupils by intelligence tests. School review, 28: 249-51, April, 1920.

Procedure in Lawrence, Kans., junior high school.

Branson, Ernest P. An experiment in arranging high-school sections on the basis of general ability. Journal of educational research, 3: 53-5, January, 1921.

Nine hundred pupils in the eighth grades and two classes in the high school of Long Beach, Calif., schools were tested with the Otis group scale. Conclusion reached that the course of study should be examined with the needs of weak classes in mind, and that the granting of credits and the system of credit bookkeeping and program planning should be made elastic.

Church, Harry V. Differentiated courses for pupils of superior ability in the J. Sterling Morton high school. Twenty-third yearbook of the National society for the scientific study of education, 1924. p. 367.

Pupils (J. Sterling Morton high school) Cicero, Ill., grouped in sections homogeneous in ability, by means of group tests, performance, teacher's judgment and individual tests. Advises that colleges accept units of superior pupils who do work in less than standard time, that is, a pupil who has ability to do three years' work in two or two and one-half year should be allowed full credit.

Clerk, F. E. Providing for individual differences through grouping by abilities. Organization and practical working plan. Eighth annual school-week proceedings, University of Pennsylvania. Bulletin, vol. 21, June 18, 1921. p. 243.

Grouping pupils in Winchester, Va., by use of teachers' judgments, marks, achievements, and tests. Groups formed—accelerated, normal, and slow.

Cook, R. R. A study of the results of the homogeneous grouping of abilities in high-school classes. Twenty-third yearbook of the National society for the scientific study of education. Bloomington, Ill., Public school publishing co., 1924. p. 302-12.

Grouping high-school students according to ability secures better results than random grouping, but special instruction should be given special groups.

Doten, Willard. Tests for ability grouping. American school board journal, 63: 37-8, October, 1921.

Pupils of Montclair high school, N. J., grouped by ability on the National and Haggerty tests. Work of the groups differentiated with satisfactory results.

Feingold, Gustave A. The sectioning of high-school classes on the basis of intelligence. Educational administration and supervision, 9: 390, 415, October, 1923.

Sectioning by ability introduced in the Hartford public high school in 1922 with favorable results for pupils and teachers.

Views of teachers on the sectioning of high-school classes on the basis of intelligence. Educational administration and supervision, 9: 467-86, November, 1923.

Questionnaires sent to 33 teachers who had either "A" or "B" pupils in Hartford high schools. Replies summarized. Concludes that segregation of at least freshman classes in high school yields positive and immediate benefits; that more thorough teaching with both "A" and "B" pupils results, and that new possibilities in secondary education are provided.

Glass, James M. Classification of pupils in ability groups. School review, 28: 495-508, September, 1920.

The junior high school an exponent of educational provision for individual differences. Summarizes tests on junior high-school pupils, and concludes that ability grouping is an administrative resource to promote the fundamental purposes for which the junior high school is established; facilitates adaptation of the curriculum to the individual; creates competition; avoids discouragement; removes mental indolence; and is, therefore, an educational square deal.

Hughes, W. Hardin. Provisions for individual differences in high-school organization and administration. Journal of educational research, 5: 62-71, January, 1922.

A paper on the results of a questionnaire from 221 high schools in all parts of the United States. The great majority of high schools do not provide adequate solution of the problem. A discussion with recommendations.

Miller, W. S. The administrative use of intelligence tests in the high school. Twenty-first yearbook of the National society for the study of education, 1922. p. 189-222.

Contains: What do mental tests measure? The selection and giving of mental tests; recording the test scores; tabulation of results; the percentile graph; correlation graphs; classification on the basis of test scores; mental tests and school marks.

Moyer, Edward L. A study of the effects of classification by intelligence tests. Twenty-third yearbook of the National society for the study of education, 1924. p. 313.

A comparison of Latin and algebra students of like ability who were taught in mixed classes and in classes grouped according to standing on intelligence tests. Standardized tests and teachers' marks used. Concludes that in grouping, those who are accidentally misplaced in higher sections profit, while those misplaced in lower sections suffer.

Owens, Morgan B. Homogeneous grouping of eighth and ninth grade mathematics students. Master's thesis, George Peabody college for teachers, 1924.

This study is devoted primarily to an analysis of the relationship between the scores in intelligence tests, teachers' marks, and standard educational tests in mathematics, the purpose of which is to determine the scientific basis on which to group homogeneously eighth and ninth grade mathematics students. Involves 316 unselected students in Pine Bluff, Ark., junior high school.

Reavis, William C. Studies of gifted children in the high school. Twenty-third yearbook of the National society for the study of education, 1924. p. 355.

A beginning in providing for superior students in high school. Responsibility is administrative in character.

Sangren, Paul V. Intelligence tests and the classification of students in ninth-grade English. Educational administration and supervision, 9: 547-53, December, 1923.

Ninth-grade English students at Zeeland, Mich., classified into three sections on basis of scores on Terman test. Van Wagenen reading scale; Carr English vocabulary test; Briggs English form test; Kirby grammar test given. Concludes that achievements of the three sections, correlations between various tests and percentages of pupil-displacement show Terman group test a fair basis for classification into three groups. All tests measure abilities equally as significant in predicting achievement in ninth-grade English.

Stetson, Paul Clifford. Homogeneous grouping in the first year of a five-year high school. School review, 29: 351-65, May, 1921.

Experiment with five-year high school, Muskegon, Mich., from 1918-1920. Homogeneous grouping attempts to provide an equal opportunity for all types of pupils through the recognition of individual differences. In " . . . reducing the percentage of failures we have not notably succeeded, but in increasing interest in class work, in offering wider opportunity for individual development, through giving a more intensive course to slow pupils, and a more extensive course to the bright pupils, we feel that the experiment is well worth continuing."

Terman, Lewis M. The use of intelligence tests in the grading of school children. Journal of educational research, 1: 20-32, January, 1920.

Discusses the range of intelligence in the first year of high school; mental age standards for grading; intelligence tests of school laggards; intelligence tests for the gifted; the I. Q. as a basis of prediction; intelligence tests in vocational and educational guidance; and gives suggestions for the use of mental tests.

Thorne, Norman C. Recognizing individual differences as practiced in the Lincoln high school, Portland, Oreg. American school board journal, 71: 55-6, 70, July, 1925.

Describes and evaluates results of an experiment in grouping high-school pupils according to scholarship for purposes of classroom instruction in Lincoln high school, Portland, Oreg.

Winter, O. Chicago intelligence test in Harrison technical high school. School review, 28: 772-75, December, 1920.

Use of the test devised by Rugg and Freeman, and division of pupils into groups. The evidence appears to justify the conclusion that the Chicago intelligence test does classify students fairly well according to their ability to succeed in high school.

Woo, Mien. Study of provisions for gifted children in secondary schools in California. Master's thesis, University of California. May, 1923.

Woody, Clifford. Measurement of the effectiveness of differentiation of high-school pupils on the basis of the Army intelligence tests. Journal of educational research, 7: 397-409, May, 1923.

Results obtained from ability grouping. Bureau of educational reference and research. Bulletin No. 72. (Reprint.)

RECORDS

Glass, Leroy Conrad. Child accounting records in senior high schools of Wisconsin. Master's thesis, University of Wisconsin. 1923.

Kerans, Kenneth Milner. A comparative study of the record cards and report forms used in California union high schools, with recommendations leading toward standardization of such forms. Master's thesis, University of California. May, 1923.

Ross, Clay Campbell. The diagnostic value of individual record cards. Educational administration and supervision, 9: October, 1923.

Studies the correlation of items from elementary individual record cards with two criteria of high-school success.

SCHEDULE MAKING

Edmonson, J. B., Bow, Warren E., and Tassell, Irvin van. The daily schedule in the high school. Washington, D. C., Government printing office, 1924. 17 p. (U. S. Bureau of Education. Bulletin, 1924, no. 15.)

Sets forth general conditions governing the making of the daily schedule and gives accounts of actual procedure followed in certain schools. A summary of practices is made from questionnaire returns from 21 high schools enrolling approximately 1,000 students each. Annotated bibliography.

Marsh, John A. Making a high-school program. Educational administration and supervision, 6: 202-14, April, 1920.

Gives the details of schedule making in English high school, Boston, Mass.

Richardson, Myron W. Making a high-school program. Yonkers-on-Hudson, N. Y., World book co., 1921.

Describes a technique of making a high-school program using data from the Boston girls' high school.

SIZE OF CLASS

Davis, Calvin Olin. The size of classes and the teaching load in the high schools accredited by the North central association. School review, 31: 412-29, June, 1923. Also in North central association. Proceedings, 1923. Part I, p. 30-70.

Reports on data secured from 100 North central association schools concerning size of class and the teaching load. Concludes that the size of class has little or nothing to do with term grades and size of class is not the most important factor in determining teaching load. An analysis of the various factors entering into teaching load is made.

Harrington, Edward Wentworth. Size of high-school classes. Master's thesis, University of California. May, 1922.

Stevenson, P. R. Relation of size of class to school efficiency. University of Illinois. Bureau of education research. Bulletin no. 10, 1922.

Studies four large high schools of Chicago and high schools of Macomb, Shelbyville, and West Aurora, Ill., for the purpose of determining the relation of size of class to school efficiency. Introduces data for 22 large and 22 small English classes showing size of class, average intelligence, score of class, average term grade and average examination grade; compares average intelligence records, average term grades, and average examination grades for 67 large and 67 small classes in various high-school subjects. Concludes that the same average achievement may be expected from the pupils taught in large classes as from those taught in small classes.

STUDENT GOVERNMENT

Archer, C. P. School government as an educative agency. School review, 31: 430-38, June 1923.

Reports on a questionnaire study which secured data from 62 high schools of Iowa concerning practices affecting the student council. Data from 1,080 north central schools are also introduced. Concludes that the student council is a good educative agency for training in citizenship.

Elsa, Albert F. Student participation in school government in Missouri high schools. Master's thesis, George Peabody college for teachers. 1923.

The purpose of this thesis is to find the facts relating to student participation in government in high schools of Missouri. The study is based on a questionnaire for which were secured 405 returns. Poor teachers in Missouri are unable to set up student government.

Hayden, Floyd S. Democracy in high-school government. School review, 30: 187-92, March, 1922.

Introduces objective data from a California high school showing superior grades earned by pupils under supervised study as compared with general study hall. Outlines also the organization of a student welfare council.

Satchell, J. Kenneth. Student participation in school administration. School review, 30: 733-41, December, 1922.

Gives results of a survey of Pennsylvania high schools relative to student participation in administration. Summarizes replies from 150 schools, stating number having student organization for participation in administration and attitude of administration towards such participation. Finds a favorable attitude.

TESTS AND MEASURES

Dawson, Charles D. Educational measurement in Grand Rapids. Journal of educational research, 2: 611-14, October, 1924.

A discussion of the program of testing.

Hughes, J. M. The use of tests in the evaluation of factors which condition the achievement of pupils in high-school physics. *Journal of educational psychology*, 16: 217-31, April, 1925.

Content described in title.

Hull, Clark L., and Limp, Charles E. The differentiation of the aptitudes of an individual by means of test batteries. *Journal of educational psychology*, 16: 73-88, February, 1925.

Differential psychology to be valuable must forecast individual differences. Investigates aptitudes for shorthand, typewriting, high-school English, and algebra. Seventy-three student records of 40 tests, using Terman test, Hoke's group stenographic ability test, and Downey's will-temperament test were analyzed. Concludes that to distinguish the various degrees of different aptitudes in a single person is different and more difficult than to distinguish various amounts of a single aptitude in different persons, but there are real differences in the aptitude of individuals for such similar activities as learning the subjects taught in high school.

Koos, Frank H. Educational measurements in a small school system. *Journal of educational research*, 2: 493-501, June, 1920.

Progress of teaching in Anoka, Minn., and use of tests including Ayres' handwriting and spelling scales, Nassau county supplement to Hillegas composition scale, Thorndike scale alpha 2, Kansas silent reading tests, Courtis tests in arithmetic, Stone reasoning tests, and Trabue completion test language scales.

Mead, C. D. Measuring classroom products in Berkeley. University of California. Bureau of research in education. Study no. 1, 1921.

Morrison, J. C. The use of standard tests and scales in the Plattsburg high school (New York). University of the state of New York. Bulletin no. 784, July 15, 1923.

Describes the administrative uses made of tests in Plattsburg high school. Test data are given and analyzed.

Buch, Giles M. An experiment with forced promotion. *Educational administration and supervision*, 6: 71-3, February, 1920.

Presents data showing the outcome of a small number of forced promotions. University high school, Oreg. Tests used: Courtis arithmetic tests, Kelly silent reading, and Gregory language test. Concludes that a careful combination of standard tests, intelligence ratings, physical data, past school records, etc., can be made to offer a reliable basis for forced promotions where necessary.

AIMS AND OBJECTIVES

Alltucker, Margaret M. Socializing function of the modern high school. Master's thesis, University of California. 1920.

Bobbitt, John Franklin. The actual objectives of the present-day high school. *School review*, 29: 256-72, April, 1921.

Attempts to get at the actual objectives of high schools through a survey of 51 representative high schools on an analysis of their course offerings.

Clement, John A. Attitudes toward curriculum making and secondary school objectives. *Educational administration and supervision*, 8: 541-56, December, 1922.

Summarizes efforts at statement of secondary education objectives and introduces samplings of efforts at adaptation of subject matter to objectives.

Denny, Christine. The changing objectives for the teaching of Latin in secondary schools, as shown by committee reports and investigations. Master's thesis, University of California. June, 1925.

Mikesell, Wilbur Beery. A study of the aims of commercial education in public high schools; to determine the main objectives for the commercial courses of such schools. Master's thesis, University of California. May, 1923.

BUILDINGS AND GROUNDS

(See also Surveys.)

Dresslar, Fletcher B. American school buildings. Washington, D. C., Government printing office, 1925. 100 p. (U. S. Bureau of education. Bulletin, 1924, no. 17.)

The best and newest methods of schoolhouse location, planning, constructing and equipping, lighting, heating, ventilating, sanitation, recreation facilities, laboratories, classrooms, assembly rooms, architecture. Many pictures and floor plans of typical schools reproduced.

Lathrop, Edith A. Dormitories in connection with public secondary schools. Washington, D. C., Government printing office, 1922. 36 p. (U. S. Bureau of education. Bulletin, 1922, no. 12.)

Includes historical study of the developments of dormitories in connection with high schools; a table showing distribution of dormitories by States, etc.; report on types of buildings and management based on replies to questionnaires from 29 high schools maintaining dormitories; and descriptions of 10 typical dormitories.

National education association. Commission on the reorganization of secondary education. High-school buildings and grounds. Report. Washington, D. C., Government printing office, 1922. 49 p. (U. S. Bureau of education. Bulletin, 1922, no. 23.)

The report enumerates certain conclusions that are the outcomes of successful practice as found through the study of many school plants. Photographs and plans of typical high school plants given.

CURRICULUM

AGRICULTURE

Dorsey, Ervin. The relationship between scope and size of agricultural projects to profits and other aims. Master's thesis, George Peabody college for teachers. 1922.

The data for this study were obtained from State supervisors of vocational education in Tennessee, South Carolina, West Virginia, and Oklahoma. These data were treated discursively. The study finds that 75 per cent of the projects are too small.

Dyer, William P. Some standards for home project work in agriculture. School review, 29: 451-59, June, 1921.

Surveys practices in Smith-Hughes departments of high schools and sets up tentative standards for home project work in agriculture.

Gaines, V. C. Job analysis applied to the teaching of vocational agriculture. University of California. Division of vocational education. Bulletin no. 8, 1922.

Hillman, James Elgan. Project outlines for vocational agriculture. Master's thesis, George Peabody college for teachers. 1920.

Projects with field crops, horticulture, animal husbandry, and farm management and mechanics are outlined for teaching purposes.

Meadows, Thomas Burton. The status of agricultural projects in the South. George Peabody college for teachers. Contributions to education no. 13. 1924.

An inquiry into the real status of agricultural projects in the South involves study such as: (1) Comparison of agricultural projects with standards for their measurement; (2) variation of projects as to size, net profit, and hours of labor; (3) rank of projects in net profit per unit of labor; (4) the relative desirability of projects; (5) the relation of size of project to net profit; (6) the progress made by the Southern States in vocational agriculture as measured by the addition of new schools and the increased number of pupils enrolled since 1917-1918.

Miles, C. M. Laboratory exercises in vocational agriculture. Master's thesis, George Peabody college for teachers. 1924.

The study is based on 37 laboratory manuals and a large number of bulletins and textbooks. From these materials exercises are listed for the usual four-year course in high-school vocational agriculture.

Smith, Stephen E. The distribution of time in the teaching of vocational agriculture in Missouri high schools. Master's thesis, George Peabody college for teachers. 1921.

An inquiry into: (1) Is the time spent by pupils and teachers on given topics in proportion to the economic importance of the leading crops and farm animals of the community and the state? (2) How is the time distributed among the teaching exercises of recitation, laboratory work, field studies, and related studies?

Williams, Arthur Raymond. Job analysis in its application to Smith-Hughes agriculture. Master's thesis, University of California. 1922.

COMMERCIAL

Berry, Ralph E. Analysis of clerical positions for juniors in railway transportation. University of California. Division of vocational education. Bulletin no. 5, 1921.

—— Study of work of juniors in telegraph offices, with suggestions for training. Master's thesis, University of California. December, 1921.

—— The work of juniors in retail grocery stores. University of California. Division of vocational education. Bulletin no. 9, 1922.

—— The work of juniors in the telegraph service. University of California. Division of vocational education. Bulletin no. 7, 1922.

Jessup, Eva, and Blanchard, Clyde. Analysis of the work of juniors in banks. University of California. Division of vocational education. Bulletin no. 4, 1921.

Shields, Harold G. Some shorthand and typewriting observations. School review, 31: 464-68, June, 1923.

A study of students in West Allis high school, Wisconsin. Actual and classroom experience indicates that stenography requires at least high average intelligence (C plus Alpha arm rating; mental age 15-16 plus Stanford-Binet). It is probable that success as a typist does not require so high an intelligence level. There is a definite need for a standardized shorthand test with predictive value, adaptable to any system of shorthand.

St. Louis, Mo. Typewriting survey. Public school messenger (St. Louis, Mo.), November, 1924.

Survey of typewriting conducted in the St. Louis high schools, May, 1924, to throw light on the two-year commercial courses. Includes tables showing distribution of pupils, initial enrollment, sex, chronological age, I. Q., M. A., results, comparisons, influences, etc. Conclusions. 18 pages.

Tuttle, W. W. The determination of ability for learning typewriting. *Journal of educational psychology*, 14: 177-81, March, 1923.

A description of the tests used on 20 students beginning the study of typewriting. Concludes that certain native abilities are closely related to capacity for learning typewriting. Results showed that those making a mark of 80 or above on the tests will become excellent typists, while those who score 75-79 will be average, and below 75, poor or failures.

University of California. Division of vocational education. Analysis of department store occupations for juniors. *Bulletin*, 1920, no. 2.

ENGLISH

Capps, A. G. Curriculum content of a high-school spelling course. *Journal of educational research*, 2: 626-35, October, 1920.

Describes technic of using the frequency of error in determining the directed curriculum in spelling for high-school pupils; presents standards of efficiency attained; shows frequency of error for specified words and compares this list with the Ayers frequency of use list.

Dickinson, C. E. The correlation of silent reading ability. Master's thesis, Indiana university. 1924.

Faulkner, Jacob Olin. English in the secondary schools. Master's thesis, Pennsylvania state college. June 16, 1920.

Discusses: (1) Recent history of the high-school English course; (2) present status; (3) general aims; (4) educational values; (5) organization; (6) administration of English in the high schools of Pennsylvania.

Gilliland, A. B. The effect of rate of silent reading on ability to recall. *Journal of educational psychology*, 11: 474-79, November, 1920.

Sample paragraphs of test used. Experiment given to 50 college students, 25 high-school students, and 50 grade pupils. With short paragraphs of ordinary material rapid reading is more economical.

Henmon, V. A. C. An experimental study of the value of word study. *Journal of educational psychology*, 12: 98-102, February, 1921.

Fifty-four sophomores of Madison (Wis.) high school were used in an experiment on word study to determine: (1) Increase in vocabulary; (2) increase in ability to choose words; (3) increase in ability to give meanings accurately; and (4) to read difficult prose understandingly. Tests used: Terman's vocabulary; Thorndike visual vocabulary; special list of 25 words; Trabue's completion scale L and Tests 1 a and 1 b Thorndike test. Genuinely significant differences in these abilities have been shown to result from less than a semester of word study.

Hill, Howard C. Opportunities for correlation between community life and English. *School review*, 30: 24-30, 118-26, 175-86, January-March, 1922.

Records the effect upon amount of reading of introducing social science reading material into an English course in the university high school of the University of Chicago. Shows a remarkable increase in the amount of reading of ninth and tenth grade pupils.

Hudleson, Earl. English composition, its aims, methods, and measurement. Twenty-second yearbook of the National society for the study of education, 1923. Part 1.

Chapter headings are: The aims and methods of teaching composition; What teachers consider in composition; What has been done in measuring composition abilities; The measurement of composition ability; Objective scores for measuring composition abilities.

Jamison, Grace S. A study in correlation of allied English abilities. *Journal of educational research*, 6: 241-253, October, 1922.

Tests given in the public school of Republic, Mich., showing method, use of Hillegas composition test, steps in experiment, and concludes that there is an apparent correlation between the abilities required for language, and written composition.

Larm, Ethel A. An experiment in the teaching of English composition. Master's thesis, Indiana university. 1924.

Lester, John A. A study of high-school spelling material. *Journal of educational psychology*, 13: 65-74, 152-159, February and March, 1922.

Studies compositions written upon subjects from their own experience by candidates for the College entrance examination board's papers in English in the years 1913-1919, inclusive, in order to determine words most frequently misspelled by high-school graduates, how these words were misspelled, and how these words may be taught and learned with a minimum of expenditure of time and energy on the part of teacher and student.

How simplified spelling might simplify. *School review*, 30: 131-38, February, 1922.

Studies the effect upon the spelling ability of 2,414 high-school pupils that infallible ability to apply the 32 rules of simplified spelling would have had. Finds that perfect ability to apply rules would have increased spelling ability only 4 per cent.

Spelling ability and meaning vocabulary as indication of other abilities. *Journal of educational psychology*, 16: 175-81, March, 1925.

Gives correlation coefficients of spelling ability and reading vocabulary with ability in academic high-school subjects.

McEntyre, Sophia. Social motivation of English literature teaching. Master's thesis, University of California. 1920.

McGrove, H. Ward. The use of test data as a basis for drill in grammar. *Journal of educational research*, 10: 241, November, 1924.

Outlines a successful method of using Kirby grammar test as a basis for correcting errors in grammatical form.

Maryland. State department of education. Results of Briggs' English form test, alpha, given to 5,072 first-year students in Maryland county high schools in fall of 1923. *Bulletin*, 1924.

Content described in title.

Potter, H. E. Abilities and disabilities in the use of English found in the written compositions of entering freshmen at the University of California. University of California. Bureau of research in education. Studies no. 12, 1922.

Rich, Mary D. A comparative study of recent high-school English texts indicating the degree of constructive work being done. Master's thesis, George Peabody college for teachers, 1921.

This study attempts a comparative study of 18 high-school English texts published since 1915, in order to indicate the degree of constructive work available for immediate classroom use in the average high school.

Stratton, Eleanor Pendleton. Oral composition in the high school. Master's thesis, George Peabody college for teachers. 1921.

A discussion of the need of oral composition teaching in high school; and a presentation of an outline for oral composition work in a two-three junior-senior high school. A large number of projects, including all kinds of speeches for the occasion, are given with detailed instructions for working them out. Based on work actually done in Asheville, N. C.

University of California. A handbook in ninth-year composition for teachers of English in California high schools. High school service bulletin no. 2, 1925.

Wellons, Blanche. A course of study in English language for grades 7 and 8 based upon pupils' errors, applied grammar, and standard tests. Master's thesis, Indiana university. 1920.

Woody, Clifford. Achievements in ninth-grade English in various high schools of Michigan. Bureau of educational reference and research. Bulletin no. 67, 1924. p. 1-44.

—— First-year tests in English in the high schools of Michigan. Bureau of educational reference and research. Bulletin no. 55, 1923. p. 1-20.

Wyman, J. Benson, and Wendle, Miriam. What is reading ability? Journal of educational psychology, 12:518-31, December, 1921.

Study gives results of tests, eighth-grade and high-school pupils. Tests used: Terman group, Briggs English form, Terman arithmetic, Thorndike McCall reading, Abbott Trabue, Poetry appreciation. Correlation studies show the Terman group test most reliable. Thorndike's visual vocabulary was found the best test of reading ability.

FINE ARTS

Farnum, Royal Bailey. Art education. The present situation. Advance sheets from the Biennial survey of education in the United States, 1920-22. Washington, D. C., Government printing office, 1923. 20 p. (U. S. Bureau of education. Bulletin, 1923, no. 13.)

A general survey of progress in art education during the biennium in all schools throughout the United States. Based on questionnaires to leading art educators, and study of art programs carried out in various states and cities. Trend of art study in high schools is shown and courses offered in New York city high schools outlined.

United States. Bureau of Education. Present status of music instruction in colleges and high schools, 1919-20. Washington, D. C., Government printing office, 1921. 54 p. (Bulletin, 1921, no. 9.)

Report of a study made under direction of the U. S. Bureau of education by a joint committee of the National education association, Music teachers' national association, and Music supervisors' national conference. Information gathered through questionnaire prepared by committee; tables showing variety of courses offered, number of schools offering, credits given, number giving applied music, chorus singing, glee clubs, orchestras and bands, theoretical music, and music appreciation.

FOREIGN LANGUAGE

American classical league. Advisory committee. The classical investigation, conducted by the advisory committee of the American classical league. Princeton, N. J., Princeton university press, 1924.

A summary of results with recommendations for the organization of the course in secondary Latin and for improvement in methods of teaching.

Briggs, Thomas Henry, and Miller, George R., jr. The effect of Latin translations on English. School review, 31: 756-62, December, 1923.

By analysis of over 300 translations from Cicero the authors conclude that Latin as generally taught harms English more than it helps. The study focuses its attention on the quality of English used rather than on the accuracy of translation.

Cole, L. E. Latin as a preparation for French and Spanish. *School and society*, 19: 619-22, May 24, 1924.

Material based on registrar's record of classes entering Oberlin college in 1919, 1920, 1921, together with records of the amount of Latin previously studied in high school, and records of performance in intelligence tests given to the classes which entered in these three years. States that there is a positive relationship between the amount of high-school Latin and success in first-year Spanish and in college French.

Franzen, Carl G. F. Foreign language teaching in the high schools of Iowa. *School review*, 29: 310-16, October, 1921.

A study from State department records involving 96 per cent of all Iowa high schools. Shows number of schools teaching the various languages. Ratio of students in foreign languages to total enrollment by type of school and textbooks in use. Shows that Latin enrollments are five times those for any other language.

Gilliland, A. B. The effect of the study of Latin on ability to define words. *Journal of educational psychology*, 13: 501-5, November, 1922. See also vol. 14, p. 174-76, March, 1923.

A study of the ability of 115 college freshmen selected at random to define words of Anglo-Saxon, Latin and Greek origin in relation to years of study of Latin in high school and college.

Grise, Finley C. Content and method in high-school Latin from the viewpoints of pupils and teachers. George Peabody college for teachers. Contribution to education no. 16, 1924.

This dissertation grew out of a study which the writer made in connection with the classical investigation conducted throughout the United States during 1921-1923 by the advisory committee of the American classical league. Based on 3,600 reports of pupils who had completed four years Latin. Reports came from 280 schools located in 267 towns in 41 States. Undertakes to discover: (1) What motives have led pupils to continue the study of Latin? (2) What caused pupils to drop Latin? (3) What are the interests of pupils in different parts of the reading course in Latin? (4) What methods do pupils use in preparing their lessons? (5) What are the relative values of the different methods used by the teachers? (6) What are the educational implications of the information obtained as regards content, objectives, and methods of teaching high-school Latin?

Kirk, Josephine Cummings. The need for French in secondary vocational curricula, as shown by published occupational analyses. Master's thesis, University of California. May, 1925.

Kjerland, Cratra Rosalie. Effects of the study of Latin on progress in French. Master's thesis, University of Wisconsin. 1923.

Orleans, Jacob S. Possible transfer value of the study of Latin to English vocabulary. *School and society*, 16: 559-60, November 11, 1922.

Tables showing derivation of English words from Latin are shown and discussed.

Showalter, M. V. The systematic training of Latin classes. Master's thesis, George Peabody college for teachers. 1924.

This study is based on dictionaries, elementary Latin textbooks, the Walker thesis, and Thorndike-Grinstead 22,000 word count list. From these materials a special list of phrases and abbreviations, selected to suit the needs of the beginner in the study of Latin, is grouped into a systematic and organized form for the teaching of elementary Latin.

Thorndike, Edward L. Latin as a preparation for French. *School and society*, 18: 563-70.

A report analyzing the effect of the study of Latin as commonly taught in high school upon the mastery of first and second semester French in the State university of Iowa during the year 1921-22.

Thorndike, Edward L. The effect of first-year Latin upon the knowledge of English words of Latin derivation. *School and society*, 18: 260-70, September 1, 1923.

Pupils were given three forms of the Carr English vocabulary tests at the beginning, middle, and end of term. The study shows a much larger gain for the Latin than the non-Latin pupils.

— The influence of first-year Latin upon range in English vocabulary. *School and society*, 17: 82-84, January 20, 1923.

Thorndike tests of word knowledge, forms A and B, were given in 1921-22 to all pupils, Latin and non-Latin alike, in the first year of 56 high schools as a basis for the study.

— The influence of first-year Latin upon the ability to read English. *School and society*, 17: 165-68, February 10, 1923.

Experiment conducted to see how much gain comes from the study of Latin by the use of high-school groups that have studied Latin and others that have not. They were given initial tests at the beginning and then final tests at the close of the first half year and again at the end of the year.

University of California. High school service. A four years' course in Spanish for secondary schools. Bulletin No. 1.

Werner, Oscar H. The trend in the study of foreign languages in American high schools. *School and society*, 21: 268-72, February 28, 1925.

Studies trends in enrollments in various foreign languages and in entrance requirements in 30 state universities. Concludes that while the total number of pupils studying foreign languages is increasing, the percentage of pupils studying foreign languages when based on high-school enrollment is decreasing; city high schools are turning from Latin to modern languages while rural high schools are holding to Latin; colleges and universities that make no entrance requirements in foreign languages are increasing rapidly and that approximately two-thirds of all high-school pupils who study foreign languages pursue such study one year or less. Comparatively few pupils devote more than two years to the study of foreign languages in American high schools.

Woody, Clifford. Report of Latin investigation in Michigan high schools. Bureau of educational reference and research bulletin, no. 64, 1924, p. 1-40.

GENERAL

Adams, Jess E. Curricula for small high schools: Their administration and supervision. Doctor's thesis, University of Indiana. 1924.

Bobbitt, John Franklin. Curriculum making in Los Angeles. Chicago, Ill., University of Chicago [1922]. (University of Chicago. Supplementary educational monograph, no. 20, June, 1922.)

Outlines procedure in curriculum making in Los Angeles, Calif.

Bourne, William. A basis of evaluating curriculum material in secondary schools. George Peabody college for teachers. Contributions to education no. 14, 1925.

The material for this study consists of the full four-year records of: (1) 7,352 high-school graduates in Atlanta, Birmingham, Chattanooga, Dallas, Knoxville, Little Rock, Louisville, Memphis, and Nashville; (2) 1,816 graduates from 14 towns of Kentucky, Tennessee, and Louisiana, all information being taken from the original record cards. All records are analyzed so as to set up criteria as to (1) administrative background; (2) the analysis of the subjects into core-curricula: (a) core-majora, (b) core-minora, (c) core-subminora, (d) core zero, and (e) core scheme; (3) the sequences within each core.

Churchill, J. A. Subject enrollments in Oregon high schools. Salem, Oreg., State department of education, 1925.

Gives data on subject enrollments for 260 standard four-year high schools of Oregon.

Clark, Ruth S. A glimpse of high-school courses as measured by the Otis test. *Journal of applied psychology*, June, 1922, p. 185.

Otis test given to students of entering and graduating classes of high schools in New York city. The academic course adapts itself to students with intelligence above the average for their age. But commercial, technical, industrial arts, dress-making, etc., require average intelligence. The selection within these courses, however, is not based on this factor alone. Group differences exist from a psychological point of view and are valuable in educational and vocational guidance.

Clement, John Addison. Curriculum making in secondary schools. New York, Henry Holt & co., 1923.

A study of principles, problems, and practices of curriculum making in secondary schools. Available research material is analyzed.

Cox, Philip W. L. Curriculum adjustment in the secondary school. Philadelphia, Lippincott co., 1925.

A text that brings together most of the significant research material bearing on the secondary curriculum.

Edmonson, J. B. What studies should be offered in the small high schools. *Kentucky high school quarterly*, January, 1925, p. 54-59.

Rikenberry, D. H. Permanence of high-school learning. *Journal of educational psychology*, 14: 463-81, November, 1923.

The purpose of this study is to determine the permanence of learning in certain subjects studied in high school but not continued in higher institutions.

Hammonds, Corsie. Curricula for the small high schools of Kentucky. Master's thesis, University of Kentucky.

The study considers the high school from both 8-4 and 6-6 plans of organization. Expert opinion is canvassed. Requirements of states are tabulated and a suggested program of studies with daily schedules for small high schools is outlined.

Jenkins, Frank Colbert. What is the legally authorized content of the courses of study in the high schools of the Southern States? Master's thesis, George Peabody college for teachers. 1924.

A study based on official publications of the State departments of education sets forth specifically what is included as subject matter in legally authorized courses of study and compares and contrasts the content of the courses of various States.

Monroe, Walter S. Types of learning required of pupils in the seventh and eighth grades and in the high school. University of Illinois. Bureau of educational research. Bulletin, no. 7, December 12, 1921.

Analyzes the types of learning required of pupils in grades 7 and 8 and in the high school on the basis of questionnaire returns from 317 teachers in Illinois schools. A table is introduced showing relative difficulty of types of learning from the standpoint of the pupil.

Mort, P. R., and Devricks, R. K. An accounting of general values in the small high-school curriculum. *School review*, 29: 119-34, February, 1921.

Presents, as a means of securing guidance in curriculum making, a plan for getting the opinions of graduates as to the relative value of subjects they have taken. The questionnaire used was sent 874 graduates of 10 high schools. Article based on 183 returns.

Pressey, Luella Cole. Determination of the technical vocabulary of school subjects. *School and society*, 20: 91-96, July 19, 1924.

Analysis of school subjects. Method for the analysis of 15 school subjects given, and use of the vocabulary lists derived.

Stewart, S. S. Statutory curriculum requirements for high schools. Master's thesis, George Peabody college for teachers. 1923.

This study is based on state laws and bulletins restricting the course of study issued by the state departments of the several states.

Stout, John E. The development of high-school curricula in the North central states from 1860 to 1918. Chicago, Ill., University of Chicago [1920]. (University of Chicago. Supplementary educational monograph no. 3, June, 1921. Published in conjunction with School review, and Elementary school journal.)

The study is based largely on material from original sources. Chapter headings are: The early high-school movement; similarity in general plan, and lack of uniformity in details of curricula; representative courses of study; number of courses offered; titles and organization; subjects included in curricula; constants and variables; variations in time devoted to fields and subjects; influence of size and location of schools; English; the sciences; the social studies; foreign languages, and miscellaneous subjects; organization of curricula and range of subjects; changes in subject matter.

Strickland, V. L. The time element in high-school work. School and society, 11: 117-20, January 24, 1920.

Reports on a study of the time given by high school pupils to specified subjects. Results show a wide variation between schools and between subjects in the same school.

Thorndike, Edward L. Instruments for measuring the disciplinary values of studies. Journal of educational research, 5: 269-79, April, 1922.

Thorndike here describes the devices used in studying "disciplinary values" in high-school subjects.

— The disciplinary values of studies in the opinion of students. Teachers college record, 25: 134-43, March, 1924.

The opinion of several hundred individuals as to the value of high-school subjects.

— Mental discipline in high-school studies. Journal of educational psychology, 15: 1-22, January, 1924.

This report describes the experiment carried on by the Institute of educational research to throw light on the problem of "disciplinary value."

— and Robinson, Eleanor. The diversity of high-school students' programs. Teachers college record, 24: 111-21, March, 1923.

Presents the results of a study of the curricula being followed by tenth grade pupils in 10 city school systems; shows an extreme diversity of programs followed by tenth grade pupils.

Tillinghast, Charles C. Current studies in curriculum analysis. Ninth year-book of the National association of secondary-school principals, 1925.

Analyzes current curriculum investigations in secondary education and offers a selected bibliography in curriculum study.

Uhl, Willis L. The cost of a high-school diploma. Educational administration and supervision, 10: 427-32, October, 1924.

Analyzes returns from 85,000 pupils in high schools in 41 different states to determine the time cost of a high-school diploma.

— The time element in high schools. School review, 32: 105-21, February, 1924.

Presents material from 177 high schools in 41 states, ranging in size from 50 to 5,000 pupils. Shows the time given by high-school pupils to various subjects in out of class study. Computations showing relative difficulty of studies and time requirements of different curriculums are made.

University of Chicago. High-school studies in secondary education, I. Chicago, Ill., University of Chicago [1923]. (Supplementary educational monograph, no. 24, January, 1923. Published in conjunction with School review and Elementary school journal.)

Contains: The major lines of experimentation in the laboratory schools; constructive student accounting in the secondary school; a preliminary experimental study of technique in the mastery of subject matter in elementary physical science; curriculum in history; the development of a curriculum in correlated mathematics and a discussion of aims, values, and results; organization and technique of a teaching unit in English classics.

— High school studies in secondary education, II. Chicago, Ill., University of Chicago [1925]. (Supplementary educational monograph, no. 26, February, 1925. Published in conjunction with School review and Elementary school journal.)

Contains: Pupil-progress accounting in the university high school and experiments in curriculum organization and administration.

HOME ECONOMICS

Armstrong, Bena K. The use of the home project in home-making course for vocational high schools. Master's thesis, George Peabody college for teachers. 1920.

It is the purpose of this thesis to show how vocational home economics courses can be made to function in the home and result in the preparation of efficient home-makers. Many projects and practical suggestions are made and a list of projects is included.

Bowman, Leona F. A study in organization of food and clothing courses in high-school home economics. School review, 31: 54-66, January, 1923.

Analyzes returns from 197 high schools in 43 states showing time allotments, types of organization of courses, practice concerning requirement and election of courses, and range of courses in home economics.

Calvin, Henrietta W. Home economics education. Washington, D. C., Government printing office, 1923. 19 p. (U. S. Bureau of education. Bulletin, 1923, no. 6. Advance sheets from Biennial survey of education in the United States, 1920-22.)

General survey of progress during biennium. Section on home economics in high schools. Concrete illustrations of work as carried on in various cities given.

Morgan, Agnes Fay. A survey of the teaching of home economics in public secondary schools of California. School review, 29: 574-85, October, 1921.

A survey of the status of teaching home economics in California secondary schools showing courses offered, prerequisites for work in high-school home economics, average size of classes, length of period, textbooks in use, number and arrangement of rooms, and the practice of operating cafeterias or lunch rooms.

National education association. Commission on the reorganization of secondary education. Reorganization of home economics in secondary schools. Washington, D. C., Government printing office, 1922. (U. S. Bureau of education. Bulletin, 1922, no. 5.)

General in nature. Suggestive courses for grades 7 to 12; projects; and suggestions concerning rooms and equipment are given.

Shelby, Helen. The teaching of textiles in the secondary schools of the Southern States. Master's thesis, George Peabody college for teachers. 1922.

Establishes five points concerning the teaching of textiles: (1) major emphasis is upon construction of garments; (2) is carried on in connection with sewing in most schools; (3) the emphasis is upon the production and manufacture of fabrics; (4) the selection and buying of clothing should receive more emphasis; (5) the work should include a study of actual materials as to content, quality, suitability, durability, cleansing qualities and cost.

MANUAL ARTS

Hyder, Le Roy. The present status of manual training in the South. Master's thesis, George Peabody college for teachers. 1922.

A questionnaire study of manual training with regard to the subjects offered; time allotments; Smith-Hughes aid; teaching combinations; aims, methods and repair work; the experience, preparation, and salaries of teachers; and the objectives.

Shultis, Arthur. Community survey as a basis for preparation of a course in farm mechanics. Master's thesis, University of California. December, 1923.

Turner, Gordon H. Manual training in Tennessee high schools. Master's thesis, George Peabody college for teachers. 1924.

This is a definite and detailed study of manual training in Tennessee, with the intention of formulating a suitable course of study for the seventh, eighth, and ninth grades.

MATHEMATICS

Atkinson, Julia F. Possibilities of the use of secondary school textbooks as the basis of a course for prospective teachers of secondary mathematics. Master's thesis, University of California. 1922.

Blair, Vevia, and others. An experimental course in senior high-school mathematics. Teachers college record, 22: 394-414, November, 1921.

Outlines and analyzes content of an experimental course in senior high-school mathematics developed in the Horace Mann school. The old and new courses in grade 10 were run parallel and comparisons made.

Cox, Willa Claire. What the state universities are requiring in mathematics for admission to their various schools and colleges. Master's thesis, George Peabody college for teachers. 1924.

The title describes the study.

Dickinson, E. L., and Ruch, G. M. An analysis of certain difficulties in factoring in algebra. Journal of educational psychology, 16: 323-28, May, 1925.

Reports the results of a series of tests designed to bring out difficulties in algebra due to non-conventional letters, subscripts, upper case letters, decimal coefficients, etc. Applied to 600 pupils in selected high schools.

Eadie, Benita Gertrude. Supplemental mathematics: the design and content of a mathematical course supplemental to automobile repair shop practice. Master's thesis, University of California. 1921.

Feltges, Edna May. Critical study of representative texts in reconstructed mathematics for ninth grade students. Master's thesis, University of Wisconsin. 1920.

Gruver, Margaret Ella. A study of errors made by pupils in first-year algebra. Master's thesis, University of California. July, 1925.

Kelley, Truman L. Values in high-school algebra, and their measurement. Teachers college record, 21: 246-90, May, 1920.

The purpose was to measure the success of a course in mathematics specifically planned to realize much broader values of the subject than ordinarily taught.

Macomber, Gertrude Louise. Influence of English and French writers of sixteenth, seventeenth, and eighteenth centuries on teaching of algebra. Master's thesis, University of California. May, 1923.

Mathematical association of America. National committee on mathematical requirements. The reorganization of mathematics in secondary education. A summary of the report. Washington, Government printing office, 1921. 73 p. (U. S. Bureau of education. Bulletin, 1921, no. 32.)

The eight chapters appearing in this bulletin are printed in full from the complete report. They are quite general in nature, statements of principles, and expressions of opinions, suggested outlines of curricula, etc. A synopsis of the complete report is given. The remaining chapters give for the most part results of special investigations conducted for the National committee. The complete report can be obtained from Prof. J. W. Young, Hanover, N. H., chairman of the committee.

Merick, Gordon R., and Sanford, Vera. A study of a pupil's knowledge of algebra at the beginning of his junior year in high school. *Mathematics teacher*, 18: 171-81, March, 1925.

Analyzes data secured from tests constructed to determine the mathematical abilities of eleventh grade high-school pupils.

Schreiber, E. W. A study of the factors of success in first-year algebra. *Mathematics teacher*, 18: 65-78, 141-63, February and March, 1925.

Chapter I, One hundred and sixty first-year algebra pupils of Maywood, Ill. tested by Curtis, Hotz, and Otis tests. Chap. II, Examination of abilities. Chap. III, Relationship of abilities. Correlations of abilities to add, multiply, solve equations and formulae, and derive equations with each ability and with general intelligence. Chap. IV, Analysis of problems solved and failed. Chap. V, Analysis of failure. Chap. VI, Summary and conclusions concerning the 160 pupils of eight first-year algebra classes at Proviso, Maywood, Ill.

Simons, Lao G. Introduction of algebra into American schools in the eighteenth century. Washington, D. C., Government printing office, 1924. 80 p. (U. S. Bureau of education. Bulletin, 1924, no. 18.)

Studies influences leading to introduction of algebra into American education through Harvard, Princeton, and the University of Pennsylvania, showing early trends in methods, amount of training, etc.

Symonds, Percival M. The psychology of errors in algebra. *Mathematics teacher*, 16: 123-34.

Thorndike, Edward L. The strength of the mental connections formed in algebra. *Mathematics teacher*, 15: October, 1922.

A study of the degree of mastery of algebra of high-school pupils who had studied algebra at least one year. Data are introduced from 10 selected schools concerning the ability to do tasks set by a test involving 28 algebraic problems.

— The permanence of school learning. *School and society*, 15: 625-27, June 10, 1922.

Studies retention of abilities in algebra from college entrance to beginning work of law school (four years) and from grades 9 and 10 of high school. Finds considerable retention of abilities.

Wood, Ben D., and Bell, J. Carleton. Solution of problems in geometry. *Journal of educational psychology*, 11: 316-26, September, 1920.

Stockard Bell tests in plane geometry were given to 142 freshmen, University of Texas. The test is printed. Concludes high correlation of memory with geometrical ability, of excellence in verbal expression with geometrical ability. Motor manifestations prominent with the poor group are absent with the good group. The efficacy of the test is proven.

Woody, Clifford. Scores made by seniors on the Hotz algebra scales compared with scores made by high-school students taking algebra. *School and society*, 16: 303-6, September 9, 1922.

Compares the scores of seniors in a large Michigan high school on the Hotz algebra scales with the scores of students taking algebra at the time of testing. Finds a large amount of retention of the formal aspects of algebra but a small amount of the problem aspect of the subject.

MORAL AND RELIGIOUS

- Bennion, Adam Samuel. Objective determination of materials for course of study in biblical literature. Master's thesis, University of California. December, 1923.

PHYSICAL EDUCATION

- Bcall, Elizabeth. Essential qualities in certain aspects of physical education with ways of measuring and developing the same. Master's thesis, University of California. May, 1925.

Special reference to tennis.

- Shepherd, Homer P. Physical education as contributing element in the health program of Lincoln high school. (Source unknown to compiler.)

Outlines the physical education program in Lincoln, Nebr., high school and gives data on gains and losses in weight of 28 boys over a period of four and one-half months in special rest classes; per cent of pupils needing corrective exercises; sport preferences of boys and girls; actual participation of boys and girls in afterschool sports.

- Smith, Francis Ferdinand. Minimum essentials in an adequate physical education program for high schools. Master's thesis, University of California. 1922.

SCIENCE

- Bishop, Elizabeth Louise. The status of science in the California high-school programs of studies. Master's thesis, University of California. May, 1925.

- Bolton, Frederick Elmer. Should physics be required for university entrance? School review, 32:432-41, June, 1924.

Surveys the high schools of the state of Washington with reference to practice and opinion concerning the requirement of physics for college entrance and for high school graduation. Reports opinion adverse to requiring physics.

- Briggs, Thomas H. Naive questions in science teaching. School science and mathematics, 23:33-40.

The study of reactions of superior adults when confronted with an unusual object. An analysis of the implications of these reactions with respect to teaching science.

- Results of the Bell chemistry test. Journal of educational psychology, 11:224-28, April, 1920.

A study of the Bell chemistry test based on scores of 27 high-school boys of Reading, Pa., and 11 high-school boys of Horace Mann school, New York city.

- Chu, Chi Hwang. General science in Wisconsin high schools. Master's thesis, University of Wisconsin. 1924.

- Cunningham, Harry A. Laboratory methods of natural science teaching. School science and mathematics, 24:709-15.

A learning study.

- Curtis, Francis D. Some values derived from extensive reading of general science. Doctor's thesis, Columbia university. Contributions to education no. 163, 1924.

An analysis of scientific attitudes, of newspaper science, and of scientific interests, as a means of securing criteria governing the selection of extensive reading materials; also a learning study to determine objectively some values from extensive reading in typical school situations, with an interpretation of the bearings of the findings upon current practices in teaching general science.

Finley, C. W., and Caldwell, O. W. Biology in the public press. New York, Columbia university, Lincoln school of Teachers college, 1923. (Monograph, 1923.)

An extensive analysis of biological material found in the newspapers and an analysis of the findings in terms of their relation to course materials in high school biology.

Foster, Frank K. Science in the accredited high schools of Washington. School review, 30: 424-30, June, 1922.

Shows science courses offered, number of schools offering, number of units in each science offered, required and elective courses, year in which offered and enrollments for the 147 accredited high schools of Washington.

Frost, Arthur Henry. Minimum essentials of a high-school course in biology. Master's thesis, University of Wisconsin. 1924.

Gerry, Henry L. Further data on the Bell chemistry test. Journal of educational psychology, 11: 398-401, October, 1920.

A study of two high-school groups (Biddeford, Maine, and Worcester Academy, Mass.) of 22 juniors and 25 seniors in comparison with data from 14 Texas schools.

Hargrave, Ellis R. A study of botany teachings in the high schools of Indiana. Master's thesis, Indiana university. 1925.

Hunter, G. W. Report of the committee on a one-year fundamental course of biological science. School science and mathematics, 23: 656-64, October, 1923.

Hurd, Archer W. A study of the relative values of the topical versus the problem method in the acquisition of information on the subject of heat in high-school physics with its implications. Master's thesis, University of Minnesota, College of education. Education research bulletin, vol. 28, no. 2, January 17, 1925.

A learning study.

Kellogg, William Smalling. Status of general science in California, with especial emphasis on phases of teacher training, content and method. Master's thesis, University of California. December, 1921.

Laker, W. B. The articulation of general science with the special sciences. General science quarterly, 9: 158-73, March, 1925.

Analyzes content of 31 commonly used science texts in an effort to determine the articulation of general science with the special sciences. Data on aims and enrollments in science subjects are also introduced.

Meier, Lois. Current practices in the teaching of science in the seventh and eighth grades. General science quarterly, 9: 1-7, January, 1925.

A questionnaire study showing teachers' preferences and practices with respect to subject matter units and material.

Meister, Morris. The educational value of certain high-school materials and activities in science. Doctor's thesis, 1921. Digest, under the title of educational values of scientific toys. School science and mathematics, 22: 801-13; Digest, General science quarterly, 7: 167-80.

A learning study of the results of teaching the curriculum materials of general science through the medium of supervised playing with toys.

Ottmyer, E. F. Results of an objective standard test on weather. General science quarterly, 8: 500, March, 1924.

A test devised for general science classes. Description and results as given to 459 pupils in York (Pa.) high school. Terman test "A" also given. Classical and scientific groups above the average scores of the commercial and industrial groups.

Powers, Samuel R. Achievement in high-school chemistry; an examination of subject matter. Teachers college record, 25: 203-11, May, 1924.

Examination of subject matter through a series of tests and comparisons of work in different schools.

— A comparison of the achievement of high-school and university students in certain tasks in chemistry. Journal of educational research, 6: 332-43, November, 1922.

Tests made on 731 high-school pupils, and 225 college students in chemistry on subject matter. There is little difference between students who have taken chemistry in university freshmen classes and those who have taken chemistry in the better high schools. Students from larger high schools do better than those from small high schools. High-school students score high in ability to write names of compounds from formulas, etc., but low on ability to write the complete equation for given chemical changes.

— Diagnostic study of the subject matter of high-school chemistry. Doctor's thesis, Teachers college, Columbia university. Contributions to education no. 149, 1924.

The formulation of a comprehensive chemistry test, with the results secured from administering this test to high-school pupils and university freshmen; also an interpretation of the significances of the findings with respect to the teaching of high-school chemistry.

— Vocabularies of high-school science textbooks. Teachers college record, 26: 368-82, January, 1925.

A study of the vocabulary difficulties of various textbooks in high-school science is made to determine the suitability of the materials to the needs of the pupils for whom the books have been written. The study shows that without exception the vocabularies of the books analyzed are too difficult for the pupils who study them.

Rauth, J. W. A study of the achievement of high-school students in chemistry. Catholic educational review, p. 287, May, 1925.

Points out deficiencies in high-school chemistry and probable causes.

Ruch, Giles M., and Cosman, Leo H. Standardized contents in high-school biology. Journal of educational psychology, 16: 285-96.

A carefully worked out syllabus for a course in biology based upon an analysis of teachers' examinations and tests over a period of years.

Schoolmasters' club. Science committee reports: Report on general science. School science and mathematics, 25: 605-10. Report on biology. School science and mathematics, 25: 462-67. Report on physics. School science and mathematics, 25: 600-5. Report on chemistry. School science and mathematics, 25: 467-74.

Complete syllabi prepared in detail by committees for the Cleveland schools.

Watkins, Pauline. The science offering in the private schools of Massachusetts. General science quarterly, vol. 7-8, May, 1924.

Reports on the results of questionnaire returns from 50 representative private schools of Massachusetts ranking science subjects by number of classes and showing number of schools having specified grades and per cent of schools offering specified science subjects.

Watkins, Ralph Knupp. The values of project teaching in general science. Doctor's thesis, University of Missouri. Bureau of publications, 1923; also in General Science quarterly, 1923-24.

Evaluation of aims in general science teaching and a learning study in which the values of teaching general science by the project method are compared with the values from the usual method of teaching the subject; an interpretation of the results with respect to modern practice.

Webb, H. A. General science instruction in the grades. Doctor's thesis, George Peabody college for teachers. Contributions to education no. 4, 1921.

A very complete analysis of the subject matter found in textbooks, and an evaluation of the suitability of this matter for use in the grades, based upon tryouts of the material with the pupils.

Weckel, Ada L. Are any principles of organization of general science evidenced by the present textbooks in the subject? School science and mathematics, 22: 44-51.

An attempt to determine a standard course for general science by an analysis of textbooks.

Wilson, Harry Floyd. Reorganization of science in first-class high schools in cities of less than 5,000 in Pennsylvania. Master's thesis, Pennsylvania state college. June 12, 1923.

Discusses high-school science from point of view of aims, purposes, history, present status, value in Pennsylvania, size of schools, teachers, courses, laboratories and equipment, suggestions for improvement by teachers and principals, problems, principal courses in first-year science, biology, chemistry and physics.

SEX EDUCATION

Edson, Newell W. Some facts regarding sex education in the high schools of the United States. School review, vol. 29, no. 8, October, 1921.

Reports on a nation-wide survey by means of a questionnaire sent out by the U. S. Bureau of education. Concludes that sex education is needed; that the West has gone farthest in developing sex education; that biological sciences furnish the readiest vehicle for sex education; that sex education appears oftenest in the early high-school years; that principals approve sex education; and that an exchange of experiences among the different schools is needed as a means of making needed material available.

— Status of sex education in high schools. Washington, D. C., Government printing office, 1922. 12 p. (U. S. Bureau of education. Bulletin, 1922, no. 14.)

Data as to extent, methods, and results of sex education secured from questionnaire sent to 12,025 accredited and semi-accredited high schools, 6,488 of which replied.

Jarolerman, Nellie Myrtle. Program for integrated sex education in high-school biology, based upon a suitable vocabulary. Master's thesis, University of California. May, 1923.

SOCIAL STUDIES

Bane, Charles La Fayette. Organization of materials for teaching history in secondary schools. Master's thesis, George Peabody college for teachers.

A study of the growth of national policies, both foreign and domestic, with suggestions as to organization for use in secondary schools. A concrete illustration of the organization helpful is given in "The development of the American foreign policy." Much use is made of source material.

Davis, Calvin Olin. Training for citizenship in the North central association of secondary schools. School review, 28: 263-82, April, 1920.

Reports on results of a questionnaire study of 1,180 secondary schools of the North central association concerning provisions for arousing desirable sentiments for citizenship; furnishing information relating to the privileges and duties of citizenship; securing active participation of pupils in affairs that make for good citizenship habits; and views of principals regarding specific policies.

Dawson, Edgar. The social studies in civic education. In *Biennial survey of education, 1920-22*. Washington, D. C., Government printing office, 1924. vol. 1, p. 403-18. Chapter XVI. (U. S. Bureau of education. Bulletin, 1924, no. 13.)

A review of the work of three committees of the American historical association--the committees of seven, of five, and of eight--which, toward the end of the nineteenth century, made investigations of the status of social studies and recommended courses of study covering both elementary and secondary grades. Reviews also the subsequent work of the Commission on the reorganization of secondary education of the National education association. The results of the labors of these committees are set forth, as manifested in the development of new methods and courses in the teaching of the social studies in high schools.

Harp, Adrian Vann. The moving picture as a potential means of civic education in the high school. Master's thesis, University of California. May, 1923.

Hartwig, Caroline E. The place of the social studies in the high schools of Missouri. *Historical outlook*, vol. 13, December, 1922.

A survey of practices in 115 Missouri high schools with reference to courses offered, texts used, problems encountered by teachers, duties of teachers of social studies, causes of inadequate preparation of teachers, and objectives of social study teachers.

Hill, Howard C. Providing for superior students in the social studies. *Twenty-third yearbook of the National society for the study of education*, 1924, p. 379.

Pupils were exempted from usual requirements and opportunity for a wide reading of a supplementary character was made. Provisions for elementary research problems were also made. Results of these provisions are reported.

Hubbell, Julia B. Suggested plan for the reorganization of history material in secondary schools. Master's thesis, George Peabody college for teachers. 1922.

An investigation of the relative amount of space in secondary school history textbooks devoted to economic, military, political, geographic, and social topics; and plan for collecting and reorganizing material that may be available for secondary use.

Judd, Charles H. Report of the Committee on social studies in high school. *School review*, 28: 283-97, April, 1920.

Report analyzes content of eight textbooks in civics.

Moore, Harry H. Status of certain social studies in high schools. Washington, D. C., Government printing office, 1922. 21 p. (U. S. Bureau of education. Bulletin, 1922, no. 45.)

A study based on an inquiry addressed to 13,000 high schools, including all four-year high schools and some of the large two- and three-year schools. More than 6,600 reports were received. Data collected on number of schools offering the various courses, methods of presenting courses, enrollment in each, criticisms, etc. Civics, economics, sociology, current events, and miscellaneous courses are studied.

Murphy, Joseph M. A survey of the social studies in New England--Rhode Island. *Historical outlook*, 16: 165-66, April, 1925.

Analyzes data on sequence of courses and texts used in the social studies in Rhode Island high schools.

Rugg, Harold O. The social studies in the elementary and secondary school. *Yearbook of the National society for the study of education*, 1923. Part II.

Sections are: The situation and the need in the social studies; types of reorganized courses in the social studies; how the new curricula are being constructed; critique of method and results of reorganization.

Shideler, Ernest H. A course in modern social problems for the high school. *School review*, 28: 615-26, October, 1920.

Outlines an experimental course in modern social problems which was developed in Chicago university high school and gives pupils interest reactions to topics introduced.

Snyder, B. H. The geographical content of high school and elementary history textbooks. *Historical outlook*, vol. 12, March, 1921.

Analyzes five high school and five elementary school history texts in general use to determine the amount of and kind of geographical material included.

Stone, Eva M. American literature as a means of civic education in the secondary schools. Master's thesis, University of California. May, 1922.

Traner, Fred W. A proposed basis for the selection and arrangement of subject matter in American history for secondary grades. Master's thesis, University of California. 1921.

TRADES

Brandt, Jesse Christian. Preparation of citizens for municipal inspectorial duty through adequate presentation of secondary school subjects. Master's thesis, University of California. 1920.

Lewis, M. S. Analysis of the plasterers' trade. University of California. Division of vocational education. Bulletin no. 14, 1924.

Palmer, Emily G. Survey of the garment trades in San Francisco. University of California. Bureau of research in education studies. Study no. 3.

Stier, L. G. Analysis of the cabinetmakers' trade. University of California. Division of vocational education. Bulletin no. 12, 1923.

— Analysis of the house carpenters' trade. University of California. Division of vocational education. Bulletin no. 11, 1923.

VOCATION

Alberty, H. B. The vocational, educational, and recreational interests of the children of the Cuyahoga County, Ohio, school district, grades 7 to 12, inclusive. Master's thesis, Ohio state university. 1923.

Gives data on vocational, educational, and recreational interests of 1,328 boys and 1,362 girls of grades 7 to 12, inclusive, in Cuyahoga County, Ohio.

— The vocational interests of children. *Industrial arts magazine*, 12: 255-58, July, 1923.

Reports vocational interests for pupils of grades 7 to 12 in Cuyahoga County, Ohio, schools. Approximately 3,000 cases are included.

Counts, George S. The social status of occupations: a problem in vocational guidance. *School review*, 33: 16-27, January, 1925.

The study ranks 45 occupations according to social status.

Crathrone, A. R. Change of mind between high school and college as to life work. *Educational administration and supervision*, 6: 274-84, May-June, 1920.

Analyzes returns from 2,069 college freshmen in 12 higher institutions of learning showing tendencies to have choice of occupation at high school and at college entrance and to change occupational choice between high school and college entrance.

Douglass, Aubrey A. Vocational interests of high-school seniors. *School and society*, 16: 79-84, July 15, 1922.

A survey of high-school seniors of the state of Washington giving for 2,844 seniors (a) prospective occupations; (b) reasons for choice; (c) factors of assistance in reaching decision; (d) means employed by students to learn about the callings decided upon; (e) changes of choice and reasons for changes; (f) how a college education is regarded; and (g) what student expects to do upon graduation.

Federal board for vocational education. Effectiveness of vocational education in agriculture. Bulletin no. 82, Agricultural series no. 13.

A study of the value of vocational instruction in agriculture in secondary schools as indicated by the occupational distribution of former students.

Feingold, Gustave A. The relation between intelligence and vocational choices of high-school pupils. *Journal of applied psychology*, June, 1923, p. 143.

Suggests occupational intelligence scale for high-school pupils based on choices of 512 high-school pupils. Concludes that only 46 per cent of pupils make proper vocational choices; 47 per cent choose beyond their reach; 7 per cent under-rate their ability; advisor should acquaint himself with pupils' intelligence; American youth is ambitious.

Gaiser, Paul F. Occupational representation in high school. *Educational administration and supervision*, vol. 9, December, 1923.

Studies the occupational representation in high schools from data from Spokane, Walla Walla, and Whitman County, Wash. Shows a proportionately higher representation for labor groups as compared with Counts' findings. Agricultural population falls between non-labor and labor groups.

Kitson, Harry D., and Kirtley, Lucille. The vocational changes of 1,000 eminent American women. *School and society*, 19: 110-12, January 28, 1924.

Studies from the biographies of the first 1,000 women listed in "Who's who in America" occupational changes. Data are introduced showing number changing occupations specified numbers of times, and the ages at which changes were made. Total number in each vocational group and number married in each group. Finds that only 11 per cent change vocation.

Proctor, William Martin, and Ward, Helen. Relation of general intelligence to the persistence of educational and vocational plans of high-school pupils. *Journal of educational research*, 7: 277-88, April, 1923.

An investigation to determine to what extent the vocational ambitions and educational plans of boys and girls of the high school represent significant and abiding life interests. The study is based on scores obtained in 1917-18 and a follow-up in 1921-22 of 771 high-school pupils. Of these 272 were employed and 290 in higher educational institutions. Of the employed, 40 per cent were better and 60 per cent lower than their ambitions.

Schmidt Hans W. Brief investigation of vocational trends among high-school students in Wisconsin. *Industrial arts magazine*, 1: 215-22, June, 1923.

Reports vocational trends for 8,120 Wisconsin high-school pupils in 48 schools.

Thorndike, Edward L., and Symonds, Percival M. The occupations of high-school graduates and non-graduates. *School review*, 30: 443-51, June, 1922.

Gives the results of the most important studies in this field, and supplements them by the collated facts for graduates over a period of years for Pontiac, Ill., and Auburn, N. Y. The study shows a high occupational status for high-school graduates.

DIRECTED STUDY

Beauchamp, Wilbur L. A preliminary experimental study of technique in the mastery of subject-matter in elementary physical science. University of Chicago. Studies in secondary education I. Supplementary educational monograph, no. 24, January, 1923. p. 47.

A controlled learning study to ascertain relative values of various practices with respect to directed study. Interprets results as favorable to directed study.

Brown, W. W., and Worthington, J. E. Supervised study in Wisconsin high schools. School review, 32: 603-12, October, 1924.

Describes an experiment designed to secure objective data on the comparative merits of supervised study and the class recitation plan. Interprets results as favorable to supervised study.

Brownell, William Arthur. A study of supervised study. University of Illinois. Bulletin, no. 47, vol. 22, June 8, 1925.

A summary of studies of the effectiveness of supervised study.

Brueckner, Leo. J. A survey of the use made of the supervised-study period. School Review, 33: 333-45, May, 1925.

A survey in West high school of Minneapolis to determine practice in class periods as to time given to various activities and order of activities. Data on the assignment, recitation, and supervised studies are introduced.

Cunningham, Harry A. Teaching how to study. School review, 33: 355-62, May, 1925.

Describes a course in teaching how to study as worked out in the University of Kansas experimental high school.

Davies, William Robert. Directed study—an experiment. Master's thesis, University of Wisconsin.

Hill, Howard Copeland. Individual guidance in voluntary reading. School review, 33: 365-69, May, 1925.

Describes a program of individual guidance in reading as worked out in the University of Chicago high school.

Karnes, Anthony Edmund. Comparative cost of supervised and non-supervised study in California high schools. Master's thesis, University of California. May, 1924.

Meadows, J. C. An investigation of supervised study in certain classes of the junior and senior high schools of Columbus, Miss. Master's thesis, George Peabody college for teachers. 1921.

A controlled experiment with two groups of students, one with supervised study and the other without. Shows that supervised study is more profitable with junior high-school students than with senior high-school students, more profitable in mathematics than with other subjects, of small value to bright students, and with all subjects its use is of doubtful value.

Monroe, Walter Scott, and Mohlman, Dora Keen. Errors made by high-school students in one type of textbook study. School review, 31: 36-47, January, 1923.

Analyzes study errors of 100 high-school pupils from results of a test which required the study of a short text of simple reading material.

EXAMINATIONS

Beatley, Bancroft. The relative standing of students in secondary school on comprehensive entrance examinations and in college. School review, 30: 141-47, February, 1922.

Studies the record in Harvard, the high-school record and the record on the comprehensive entrance examination of Harvard classes of 1920, 1921, and 1922. Concludes that high-school record gives a better index of the quality of work that may be expected in college, and that comprehensive examinations are superior to the old plan examinations.

Brinkley, Sterling G. Values of new type examinations in the high school. Columbia university. Teachers college. Contributions to education, no. 161.

Studies the results of experiments in George Washington and five other cooperating high schools made to determine the comparative values of different types of tests in the field of history. Old type examinations, true-false, multiple choice, completion, word or phrase answer, arrangement and essay types of tests are compared. Detailed directions for constructing and administering new type of examinations are given.

Farwell, Hermon W. New type examinations in physics. School and society, 19: 315-22, March 15, 1924.

Supplements the ordinary examinations with various psychological test forms, such as true false test, completion, recognition, etc., and illustrates method and type of question to be used.

Monroe, Walter S. The present status of written examinations and suggestions for their improvement. University of Illinois. Educational research bulletin no. 17, 1923.

Summarizes previous investigations and arguments for and against written examinations; gives the results of three extensive investigations conducted by the Illinois bureau of educational research showing coefficients of reliability for written examinations set by teachers and standardized educational tests, content of written examinations, methods of preparing types of written examinations, and makes suggestions for the administration of written examinations.

— **Written examinations versus standardized tests.** School review, 32: 253-65, April, 1924.

Outlines the trend away from written examinations towards standardized tests. Gives coefficients of reliability for written examinations and for numerous standard tests in use. Concludes that the best standard tests are definitely more reliable than written examinations as measures of achievement but that written examinations properly conducted have greater value than generally recognized.

Nash, H. B. Preliminary report on the relative value of old and new type examinations. West Allis (Wis.) public schools. Department of educational measurements.

Analyzes results of administering old and new type examinations in various high-school subjects. Finds that new type examinations are more reliable.

Sanford, Vera. A new type final geometry examination. Mathematics teacher, 18: 22-36, January, 1925.

Describes the construction and reliability of an objective final examination in geometry.

Walker, Hugh A. C. Examinations in the high school. School review, 32: 209-17, March, 1924.

Analyzes data from 81 high schools in all sections of the United States and outlines practice relative to formal examinations. Finds a tendency to lessen amount of time and attention given to written examinations.

EXTRA-CLASSROOM ACTIVITIES

Allen, Charles Forrest. Outlines in extra-curricula activities. Little Rock, Ark., High-school print shop, May, 1924.

A series of committee reports outlining in detail procedure and content material for a variety of extra-curriculum activities.

Armstrong, Marceline. A study in high-school dramatics. Master's thesis, University of California. May, 1925.

Brownell, S. M. A study of the financial management of extra-curriculum activities in Nebraska high schools. Master's essay, Yale University. 1924.

Caldwell, Albert Francis. The extra-school activities of the high-school boy. Master's thesis, University of Wisconsin. 1921.

Dement, Alice L. Values in extra-curricular organizations in the high school. School review, 32: 40-42, January, 1924.

Presents data for 25 California high schools showing the number of school organizations, the form of management employed, the purpose of each organization, the extent to which pupils participate, the accomplishments of the organizations, the approximate amount of time given to school organizations, and the cost of maintaining the organizations.

Eastman, Harry Rudolph. The administration and organization of extra-curricular activities in the senior high schools of South Dakota. Master's thesis, University of Wisconsin. 1924.

Evans, Evan E. What to do with the high-school assembly. School review, 31: 282-86, April, 1923.

Reports on a questionnaire study which secured data from 112 Kansas high schools concerning the practice in conducting assemblies.

Fretwell, Elbert K. Extra-curricula activities of secondary schools. Teachers college record, 24: 61-72, 147-58, January and March, 1923; 25: 61-69, January, 1924.

Part 1 contains a bibliography of pupil participation in the extra-curricular life of the school and lists and abstracts available material on extra-curricular activities.

Part 2 offers an annotated bibliography dealing with high-school fraternities and sororities.

Part 3 is an annotated bibliography on the high-school assembly.

Jones, Harry William. High-school experiment in extra-curricular student activities. Master's thesis, University of California. May, 1922.

Riebe, Harvey A. The influence of extra-academic and extra-mural activities upon scholarship in secondary schools. Master's thesis, University of Wisconsin. 1923.

Rush, B. S. High-school assembly exercises. Master's thesis, Indiana University. 1923. In Proceedings of high-school principals conference of 1923, vol. 1, no. 1, Indiana university school of education.

Swanson, A. M. The effect on high-school scholarship of pupil participation in extra curricular activities. School review, 32: 613-26, October, 1924.

A study of 398 students from four high schools of Kansas City. Army tests used. Concludes that high-school pupils of somewhat more than average intelligence participate in extra-curricular activities, probably as a means of expressing their intelligence beyond the demands of the curriculum, and that such participation does not significantly affect their scholastic standing.

Wise, J. Hooker, and Roemer, Joseph. A study of extra-curricular activities in the public high schools of Florida. University of Florida record, vol. 20, no. 1, June, 1925.

A comprehensive survey of practice in extra-curricular activities in Florida high schools. An exhaustive bibliography is appended.

FINANCE AND COSTS

Abel, James F. State aid to weak schools. Washington, D. C., Government printing office, 1925. (U. S. Bureau of education. Rural school leaflet no. 7.)

Discusses the purposes of state aid, methods of distribution, and state aid to high schools.

Benjamin, Harold. Subject and grade costs in Oregon high schools. Educational administration and supervision, 11: 231-37, April, 1925.

Analyzes data on subject and grade costs from 61 Oregon high schools.

Black, Allan Jay. Instructional cost per pupil-clock-hour in 67 Wisconsin high schools having 1-6 teachers. Master's thesis, University of Wisconsin, 1924.

Buell, I. A. High-school costs. Master's essay, Yale university, 1921.

Study of costs of instruction based upon returns from 34 high schools in the North Atlantic states.

Burris, Benj. J. High-school costs. Master's thesis, Indiana university, 1924. In Indiana state department of public instruction. Bulletin no. 73.

Henry, Nelson B. A study of public school costs in Illinois cities. Educational finance inquiry commission. New York, Macmillan co., 1924. (Its Publications, vol. 12.)

Items of the study of interest to secondary education are: Analysis of expenses by school enterprises; comparison of percentage of salary cost of instruction and percentage of total expenses devoted to fundamental enterprises; percentage of pupils in average daily attendance in each enterprise; cost per pupil in each enterprise; percentage of direct charges devoted to specified classes of service in fundamental enterprises; cost per pupil by departments of the high school; average per pupil cost of all departments in high schools; savings effected in total current expenses by reducing high-school curriculum to four subjects and estimated probable future costs.

Hilton, Eugene. The cost of instruction in Utah high schools. Master's thesis, University of Utah, 1924.

Gives cost of instruction per 1,000 student hours for every subject taught in Utah high schools and for practically all schools.

Jennings, Joe. A study of the relative elementary and high-school cost per pupil in 30 Tennessee schools. Peabody journal of education, 1: 229-32, January, 1924.

Gives for elementary and high schools enrollment, number of teachers, length of school term, and average salary per annum per teacher. Computes annual cost of instruction per pupil enrolled, and ratio of high school per capita cost to elementary.

Nixon, O. F. The cost and financing of student publications. School review, 31: 204-12, March, 1923.

Reports on a questionnaire study which secured data from 220 north central high schools concerning purpose, nature and type, management, cost and financing, and attitude of business and professional men toward student publications.

Beeves, Floyd W. The political unit of public school finance in Illinois. Educational finance inquiry commission. New York, Macmillan co., 1924. (*Its Publication*, vol. 10.)

Extensive data on the social and economic conditions in Illinois; administrative machinery of public school finance; Illinois school district organization; ability to support public education; school tax rates; and wealth.

Sears, Jesse B. Some data on the cost of school housing. School board journal, 68: 42-44, June, 1924.

A study of the efficiency of use of building space from data on Phoenix union high school, Phoenix, Ariz.

— and **Cubberly, Ellwood P.** The cost of education in California. New York, Macmillan co., 1924. (Educational finance inquiry commission. Publications, vol. 7.)

An exhaustive study involving: The educational program of the state; size of the educational program; financial provisions for schools; the maintenance costs of education; capital outlay costs; equalization of the cost burden; the burden of school costs; and the wealth of the state.

Strayer, George Drayton, and Haig, Robert Murray. The financing of education in the state of New York. New York, Macmillan co., 1923. (Educational finance inquiry commission. Publications, vol. 1.)

An exhaustive analysis on the basis of statistical materials of the financial problem of education in the state of New York and resources for meeting the program.

Swift, Fletcher Harper. A biennial survey of public school finance in the United States, 1920-22. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 47.)

In section 5 comparison is made between costs of education of elementary and high-school pupils. Other data deal with general school costs, methods of support, building expenditures, Federal and state policies.

— The declining importance of state funds in public school finance. School review, 29: 534-46, September, 1921.

Analyzes relative proportion of school costs borne by states and localities over the period 1890-1918 and shows a decline in the percentage borne by the states.

Willet, George W. The public school debt in Illinois. New York, Macmillan co., 1924. (Educational finance inquiry commission. Publications, vol. 11.)

Chapter headings are: Organization of schools in Illinois and bonded indebtedness for schools in 1922; the location of bonded indebtedness; the history of bonded indebtedness from 1873 to 1922; the causes for increased bonded indebtedness; the outlook for future bonding; the floating of bond issues; the cost of bonded indebtedness; floating indebtedness; a comparison of school indebtedness with indebtedness of other taxing units; and the probability of repayment of school bonded indebtedness.

GENERAL

Beede, E. H. Report of the superintendent of schools, New Haven, Conn., 1924.

Data peculiarly interesting to secondary education contained in the report are: National stock of pupils in the schools, enrollment growth 1880 to 1923, average age of pupils 1910-1923, school mortality for high-school classes of 1923 and 1924.

Belting, Paul E. The community and its high school. New York, Boston [etc.] D. C. Heath & co., 1923.

Intended as a text for students of secondary education, the book brings together a considerable amount of research materials on a variety of secondary education topics.

Cowles, LeRoy E. Report of the State high-school inspector of Utah, 1923. Salt Lake City, Utah, State department of public instruction, 1923.

Gives data on pupil enrollments by subjects, failures by subject groups; teachers' salaries; scholastic training of teachers; experience of teachers; teaching load; costs per student hour; distribution of teachers' time; experience, distribution of time, and salaries of principals; and results of silent reading survey, using Thorndyke-McCall tests; and chronological age.

Deffenbaugh, Walter S. Secondary education in 1921-22. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 12. Advance sheets from Biennial survey of education in the United States, 1920-22.)

Shows the development of secondary education for the biennial period in increase of enrollment, better administration and supervision, enlarged curricula, vocational education, homogeneous grouping of pupils, pupil activities, extra-curricular activities, supervised study, and the like. Sections on the small high school and the junior high school. Much statistical data given and concrete examples to illustrate.

Smith, Harry P. (*Superintendent of city schools.*) Review of Lawrence public schools, Lawrence, Kansas. A report of the Board of education, Lawrence, Kans., for the period July, 1920, to August, 1924. 135 p.

Gives data on administrative organization, supervision of instruction, curriculum construction, classification and progress of pupils, classroom achievement, socialization of pupils, health and physical education program, salaries, costs, school building program and reports on two research studies, i. e., intelligence of Negro children; effectiveness of kindergarten training. Data on the growth of Lawrence public schools, 1867-1924 are also presented.

Uhl, Willis Lemon. Principles of secondary education. New York, Newark [etc.] Silver Burdett & co., 1925.

This book brings together a large amount of research materials on all phases of secondary education.

Woody, Clifford. Survey of educational research in 1923. Journal of educational research, 9: 357-81, May, 1924.

GUIDANCE

Allen, Richard D. Educational and vocational guidance in the Providence public schools. National vocational guidance association. Bulletin, vol. 2, January, 1924.

Describes the Providence, R. I., form of vocational guidance; introduces data on intelligence, age and grades of high-school pupils of Providence.

Briggs, Thomas H. Prognosis tests of ability to learn foreign languages. Journal of educational research, 6: 386-92, December, 1922.

A means of selecting students, and modifying courses in foreign languages. Presents data from 598 pupils in 6 high schools showing relation of school marks to prognosis test scores as determined by a trial test which is described.

Buell, I. A. After-school courses of high-school pupils. Doctor's thesis, Yale university. 1925.

A detailed study of the careers of the pupils who entered the Hartford public high school in September, 1910.

Cowdery, Karl M. Measures of general intelligence as indices of success in trade learning. Journal of applied psychology, December, 1922, p. 311.

To what extent should the measure of general intelligence of boys be used in deciding the specific assignments to one trade or another? Data from Whittier state school (Calif.) and California bureau of juvenile research—Stanford revision tests used.

Dickson, Virgil E. The use of group mental tests in the guidance of eighth grade and high-school pupils. *Journal of educational research*, 2: 601-10, October, 1920.

A study using the Otis group intelligence scale in the schools of Oakland, Calif. Tests aided in the segregation of pupils into groups according to their capacity to do school work. The greatest benefit will arise from the discovery of and the more effective training of superior ability.

Edgerton, A. H. Analysis of occupations for purposes of educational direction and vocational guidance. In *National vocational guidance association. Bulletin no. 1, 1922.* p. 108-21.

Some factors affecting vocational choices and counseling. *Vocational guidance magazine*, vol. 3, April, 1925.

Summarizes data from several investigations showing practices in vocational counseling.

What is the guidance emphasis in our public schools? *The vocational guidance magazine*, 2: p. 142-49, March, 1924.

Reviews current tendencies in vocational and educational guidance programs.

Freyer, Douglas. Occupational intelligence standards. *School and society*, 16: 273-77, September 2, 1922.

Gives occupational intelligence standards for 46 occupations based on data of the Yerkes report on psychological examining in the U. S. Army.

Giddings, Czarina J. Getting a perspective for vocational guidance through the work permit office. In *National vocational guidance association. Bulletin*, vol. 2, December, 1923., p. 52-58.

Determines through an analysis of work permits, issued to children under 16 years of age, schools from which children come into industry and occupations into which they come.

Johnston, John Black. Predicting success or failure in college at the time of entrance. *School and society*, 19: 772-76; 20: 27-32, June 28, and July 5, 1924.

The measures used are high-school standing and psychological test scores of graduates of Minneapolis and St. Paul high schools who entered the University of Minnesota in 1921-22-23. High school rating and the intelligence rating supplement each other so that an error in prediction based upon one is corrected by the other.

Jordan, J. N. Prognosis in foreign language in secondary schools. *School review*, 33: 541-6, September, 1925.

Results of two years personal research in pupil prognosis. Eighty-one foreign language pupils tests and observations, 1922-23; 108 pupils in 1923-4. *Wilkins* test and *Terman* group tests used.

Madsen, I. N. The Army intelligence test as a means of prognosis in high school. *School and society*, 11: 625-27, May 22, 1920.

Three high schools of Omaha are used as illustrations. Four tables show median scores in school marks and intelligence and correlations of intelligence with school marks. The writer claims that intelligence testing points a practical way of vocational guidance and prognosis in high school.

— The contribution of intelligence tests to educational guidance in high school. *School review*, 30: 692-701, November, 1922.

Gives for Omaha, Nebr., high schools the distribution of pupils by occupational groups. Occupational choice of pupils in comparison with opportunities. Median Army alpha scores by year and occupational group; median intelligence quotients by occupational groups; occupational intelligence levels of pupils; percentage of pupils in each occupational group; intelligence quotients of freshmen by subjects; and compares intelligence quotients and marks.

May, Mark A. Predicting academic success. *Journal of educational psychology*, 14: 429-40, October, 1923.

How accurately could the academic success of 450 liberal arts freshmen (Syracuse) have been predicted? Miller mental ability test and the Dartmouth completion of definition test used with a maximum raw score of 160. Tables and correlations given. A correlation of 0.90 will probably not be obtained until we can measure some of the more or less intangible traits of character and personality.

Miner, J. B. An aid to the analysis of vocational interests. *Journal of educational research*, 5: 311-23, April, 1922.

Three years' trial has demonstrated the service of a blank for training pupils to analyze their work interests. It was first tried out with 8,500 pupils in the Pittsburgh high school with considerable success. Description of the blank and tables.

National society for the scientific study of education. Vocational guidance and vocational education for the industries. Twenty-third yearbook, 1924. Part II.

A comprehensive survey of the present status of vocational guidance and vocational education for the industries.

Overholtzer, Edwin Clarence. Problem of vocational guidance in high school. Master's thesis, University of California. September, 1923.

Proctor, William Martin. Psychological tests and guidance of high-school pupils. *Journal of educational research monograph*, no. 1, October, 1923.

A study of the validity of psychological tests for purposes of guidance in secondary schools. Chapter headings are: Psychological tests as a means of measuring the probable school success of high-school pupils; use of psychological tests in the industrial guidance of high-school pupils; status of 131 cases tested with Stanford revision of Binet scale, and followed for period of six years; use of psychological tests in the vocational guidance of high-school pupils; relation of general intelligence to the persistence of educational and vocational plans of high-school pupils; psychological tests and college entrance; intelligence tests as a means of admitting special students to colleges and universities.

——— Psychological tests as a means of measuring the probable school success of high-school pupils. *Journal of educational research*, 1: 258-70, April, 1920.

Group test results compared with individual test results. Army scale results compared with high-school marks. Individual and group mental tests as a means of indicating probable retention or elimination of high-school pupils. Such tests are shown to be sufficiently reliable to justify their use as aids in determining the mental level of high school students.

——— The use of psychological tests in the educational guidance of high-school pupils. *Journal of educational research*, 1: 369-81, May, 1920.

"We have made sufficient progress in the science of mental measurements to be able to estimate with appropriate accuracy the probable school success of a given pupil. The results of a practical experiment in educational guidance by means of mental tests will be described in the following pages." Tests were given to an 8A class about to enter high school and results compared with their work at the end of the first year high school.

——— The use of psychological tests in the vocational guidance of high-school pupils. *Journal of educational research*, 2: 538-45, September, 1920.

Uses and prints occupational intelligence levels, based on Army psychological tests. More effective for the selection of employees than for vocational guidance. Not practicable at present, as all students must be cared for and not a select few; however, sufficient progress has been made to use psychological tests in a negative way. Tables given for 930 pupils in eight high schools.

Rector, William Gerry. A study in the prediction of high-school success. Master's thesis, University of California. May, 1923. Also in *Journal of educational psychology*, 16: 28-37, January, 1925.

Uses records of 431 students of tenth grade. GIQ (group intelligence quotient) of alpha test (Army); scholarship and application ratings; success as based on four final semester marks. Table given and analyzed. Concludes that of the 18 students failing to make college recommending grades, only nine or 50 per cent could have been warned beforehand according to the criteria used for prediction. GIQ, scholarship and application ratings are not valid for the prediction of high-school success on the basis of teachers' marks.

Rogers, Agnes L. Psychological tests of mathematical ability and educational guidance. Mathematics teacher, April, 1923. p. 193.

Results of three years of testing using a sextet of tests of mathematical ability. Data showing prognostic power of the test; superiority of the tests to tests of general intelligence for sectioning students in mathematics classes on the basis of intellectual ability; discussion of standards.

Shepard, Bertha. Statistical material compiled by the Department of vocational guidance, Boston. *Vocational guidance magazine*, vol. 3, October, 1924.

Analyzes statistical material of the Boston department of vocational guidance concerning courses pursued, vocational preference, and occupations engaged in by graduates and placements.

Toops, Herbert A., and others. Tests for vocational guidance of children 13-16. Teachers college, Columbia university. *Bulletin* 136, 1923. p. 159.

Reports on work of the Institute of educational research at Teachers college. Tests for fitness for various careers; administered in three hours; prepared and scored cheaply.

Weisman, Sara E. A study of the use of the Stanford revision of the Binet-Simon test as a guide to election of high-school courses. *Journal of educational research*, 7: 137-44, February, 1923.

A study of a downtown school in Spokane, Wash. The quality of work done in high school by the class which was directed on the basis of the test was decidedly superior to the work of the two classes not so guided. Tables and case studies included.

Westcott, Regina Hanson. Educational guidance for the adolescent girl. Master's thesis, University of California, 1921.

HISTORY OF SECONDARY EDUCATION

Baker, Paul Everette. Development of secondary education in Oregon since 1900. Master's thesis, University of California, 1922.

Bransford, Minnie Taylor. The comparative growth of the public and private secondary schools in the United States between 1900 and 1920. Master's thesis, University of California. August, 1925.

Crane, Howard Wilson. The rise and development of secondary education in Pennsylvania. Master's thesis, University of Wisconsin. 1924.

Gerberich, John Adam. History of secondary education in Ohio. Master's thesis, University of Wisconsin, 1922.

Gifford, Walter John. Historical development of the New York state high-school system. University of the state of New York. *Bulletin* no. 753, March 1, 1922.

A comprehensive survey on the basis of statistical and source materials of the development of the New York state high-school system.

Grizzel, Emit Duncan. Origin and development of the high school in New England before 1865. New York, Macmillan co., 1923.

An examination into the origin and political, economic, and social influences that brought the high school into being in New England. The study ascribes the origin of the high school to American influences.

Hubbell, Leigh G. The development of university departments of education in six states of the Middle West. Dissertation, Catholic university of America, Washington, D. C.

Studies the development of university departments of secondary education, treating: The period of foundation; expansion and reorganization; the training of secondary teachers; research and experimentation in secondary education and extension activities on behalf of secondary schools.

Middlebrooks, John Enoch. A history of the rise and fall of the academies in Tennessee. Master's thesis, George Peabody college for teachers. 1923.

Points out the important facts about the academies in Tennessee—the purposes for which they were established, their means of support, their plan of organization and administration, their establishment and distribution, and the causes for their decline.

Rutledge, S. A. The development of the public high school in New Haven, Master's essay, Yale university. 1924.

Stoddard, James Alexander. Background of secondary education in South Carolina. University of South Carolina. Bulletin, no. 150, November 1, 1924.

A study from original sources of the development of secondary education in South Carolina. The colonial, post-Revolutionary, post-Confederate war, and post-reconstruction periods are studied.

Stout, John E. The development of high-school curricula in the North central states from 1860 to 1918. Chicago, Ill., University of Chicago [1921]. (University of Chicago. Supplementary educational monograph no. 15, 1921.)

INSTRUCTION

Alderman, Grover H. Lecture method versus the question and answer method. School review, 30: 205-9, March, 1922.

Presents results of an experiment in an Iowa high school showing comparative values of lecture and question-and-answer method. Pupils ranked in higher quartile profited most by lecture method.

Alltucker, Margaret M. What can the secondary school do for the student of low I. Q.? School review, 31: 653-61, November, 1923.

A paper on high-school students whose intelligence is below 95 I. Q. Considers mental capacity and environment and gives eight general principles as bases for the differentiation of subject-matter and method of teaching to meet the needs of the limited pupils.

Arms, Miranda Ray. Project method in teaching household arts. Master's thesis, University of California. 1921.

Breitwieser, J. V. Training for rapid reading. University of California. Bureau of research in education. Study, no. 6.

Breslich, E. R. The needs of the superior pupil in the study of mathematics. Twenty-third yearbook of the National society for the study of education, 1924. p. 372.

Recommends supervised study. Superior pupils are taught to overcome difficulties without assistance; to do more than the other members of the class; to do projects outside the lesson. Inferior pupils gain on the whole. Suggests a mathematical library.

Corcoran, Eleanor Nydia. Teaching bookkeeping in the high school. Master's thesis, University of California. 1920.

Elberg, Sister Frances Joseph. A study of the assignment. Master's thesis, Indiana university. 1923.

Gates, Georgina S., and Bissland, Louise G. The effect of encouragement and of discouragement upon performances. *Journal of educational psychology*, 14: 21-26, January, 1923.

Experiment made upon college students and results not very satisfactory but did show that either saying something against or in favor of the work had better results than saying nothing. The poor group was most affected by discouragements.

Herring, John P. Bibliography of the project method. *Teachers college record*, 21: 150-174, March, 1920.

Authors, titles, and short quotations are given of articles on the project method.

Hutchinson, Knox T. Methods of teaching farm management in vocational high schools. Master's thesis, George Peabody college for teachers. 1922.

An inquiry into the place in the curriculum occupied by farm management; the planning of the work; the time division in teaching the subject; the textbook and methods of instruction; and projects suitable for use in teaching.

Kiebler, E. W., and Woody, Clifford. The individual laboratory vs. the demonstration method of teaching physics. *Journal of educational research*, 7: 50-8, January, 1923.

Lowrey, Roswell Graves. An experiment in the orientation of the laboratory in the high school. Master's thesis, George Peabody college for teachers. 1922.

A controlled experiment to determine whether better results can be secured with a high-school class in chemistry by having laboratory work precede class discussion, or by having the laboratory work follow the class discussion. Indicates that better results are obtained with pupils whose I. Bs. were below 110 by the "recitation first" method.

Meier, Lois. Current practices in the teaching of science in the seventh and eighth grade. *General science quarterly*, 9: 1-5, November, 1921.

Analyzes results of a questionnaire returned by 53 teachers of general science in grades 7 and 8 ranking 75 general science exercises according to value and expressing opinion as to desirable method of presentation.

Monroe, Walter S. Improvement of instruction through the use of educational tests. *Journal of educational research*, 1: 96-102, February, 1920.

Upon interpretations of scores of tests in terms of pupil needs and modification of instructions to meet those needs, educational tests fulfill their function.

— **and Carlin, Ralph E.** The use of different types of thought questions in secondary schools and their relative difficulty for students. *University of Illinois. Bulletin* 20: no. 34, April 23, 1923.

Reports the results of a questionnaire study making use of returns from 109 high-school teachers of Illinois concerning the extent of use of 20 types of thought questions and the relative difficulty of these types for students. Tables showing frequency of use of type questions and relative difficulty for students introduced.

Morrison, Henry C. Studies in high-school procedure. *School review*, 29: 19-30, 106-18, 182-97, January and March, 1921.

Compares the ability to master lesson assignments in high-school Latin and French, with ability to read at sight in those languages. Concludes that there is little transfer from lesson learning to capacity to read at sight.

Pickett, William Ellis. Teaching of general science in high school, based on survey of Healdsburg high school. Master's thesis, University of California. September, 1923.

Platt, Frank J. Measuring improvement in language essentials. School review, 28: 611-14, October, 1920.

Describes an experiment in Oak Park high school, Oak Park, Ill., made to determine what improvement could be made by pupils with a list of 21 essentials in composition.

Powelson, Inez Dale. History of teaching of elementary algebra in United States. Master's thesis, University of California. 1920.

Savage, Lucy Eunice. Problem project method in high school English teaching. Master's thesis, University of California. 1920.

Schmidt, Austin G. The effect of objective presentation on the learning and retention of a Latin vocabulary. Chicago, Ill., Loyola university press, 1923.

Yarbrough, W. H. Teaching of mathematics in secondary schools. Master's thesis, George Peabody college for teachers. 1923.

The purpose of this study is to look into certain practices in instruction in secondary mathematics and some of the abuses resulting therefrom; to offer suggestions on the reorganization of the subject matter and to state and illustrate devices for presentation in the classroom.

LEGISLATION

Hood, William R. Free textbooks for public school pupils. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 50.)

An analysis of all state laws regarding the furnishing of free textbooks to pupils, showing type of school to which applicable, whether elementary, high, or both, etc.

— Legal provisions for rural high schools. Washington, D. C., Government printing office, 1924. (U. S. Bureau of education. Bulletin, 1924, no. 40.)

Outlines development and growth of secondary education since the beginning of the present century as shown in enrollment and enactment laws. Compares and analyzes laws existing at the present time in the various states as to administrative units, boards, maintenance, tuition, transfers and transportation, taxes, and classes of schools. A state by state summary of laws is included.

— Review of educational legislation, 1919 and 1920. Washington, D. C., Government printing office, 1921. (U. S. Bureau of education. Bulletin, 1921, no. 13.)

— All educational legislation reviewed. Special chapter on legislation relating directly to high schools, other chapters on support, teachers' salaries and training, compulsory attendance, the school term, health of children, libraries, which have bearing on secondary education.

— Some important school legislation, 1921 and 1922. Washington, D. C., Government printing office, 1922. (U. S. Bureau of education. Bulletin, 1922, no. 43.)

Review for biennial period of outstanding legislative enactments that affect the schools and education. Laws affecting secondary education noted. Others relating to attendance, buildings, teachers, health, textbooks, term, moral education, etc.

— State laws relating to education, enacted 1918 and 1919. Washington, D. C., Government printing office, 1920. (U. S. Bureau of education. Bulletin, 1920, no. 30.)

All educational laws classified somewhat as follows: Administration and supervision, finance and support, building and sites, teachers, school population and attendance, discipline, health regulation, textbooks and supplies, subject matter of instruction, special types of schools, secondary education, etc.

Hood, William B. State laws relating to education, enacted in 1920 and 1921. Washington, D. C., Government printing office, 1922. (U. S. Bureau of education. Bulletin, 1922, no. 20.)

Summary by states of all laws relating in any way to education enacted during the period indicated. Studies control and supervision of elementary and secondary schools; special state aid for high schools; buildings and sites; teachers; school population and attendance, discipline; health; textbooks; subject matter of instruction; secondary education.

United States. Bureau of education. A manual of educational legislation. Washington, D. C., Government printing office, 1924. 20 p. (Bulletin, 1924, no. 36.)

Prepared for the guidance of committees on education in the State legislatures. Reviews laws affecting junior or senior high schools; cost per pupil in secondary schools in 1922; state and local support; school attendance and compulsory attendance laws; school term; labor permits; physical education; school grounds and buildings; teaching staff.

LIBRARY

Certain, C. C. Report of the committee on library organization and equipment of the National education association and of the North central association of colleges and secondary schools; C. C. Certain, *chairman*. Chicago, Ill., American library association, 1920.

Miller, Douglas B. A score card and standards for an ideal high-school library. Master's thesis, University of California. August, 1925.

National education association and American library association. Books for the high-school library. Prepared by the joint committees of the school library department of the National education association, and the school libraries section of the American library association. Preliminary edition. Chicago, American library association, 1924. 279 p.

Wilson, Martha. School library management. 3d ed., rev. New York, H. W. Wilson co. 1922.

PRINCIPAL

Bawden, William T. Salaries of principals of high schools. Washington, D. C., Government printing office, 1920. (U. S. Bureau of education. Bulletin, 1920, no. 44.)

Based on questionnaire returns from 10,440 high schools in the United States. Analysis shows comparison of salaries for 1914-15, average by states, and by sections, 1919-20, ranking of states, number receiving specified salaries.

Binkley, Ralph Putman. Supervisory functions of the high-school principal. Master's thesis, University of California, 1924.

Briggs, Thomas H. What becomes of high-school principals. Ninth yearbook of the National society of secondary school principals. p. 149.

Analyzes questionnaire returns from 35 high-school principals concerning reasons for leaving field of education; characteristics of those leaving principalships; and kind of work entered.

Davis, Calvin Olin. Duties of high-school principals. In North central association. Proceedings, 1921. Part I, p. 49-69.

Summary of opinions and practices of principals of North central schools.

Dawson, Charles D. A report of 49 school systems of cities ranging in population from 50,000 to 250,000 dealing with practices in requiring principals to teach, in providing principals with clerks, and methods of fixing principals' salaries. Detroit bureau of educational record. January, 1922.

Returns are presented for individual cities.

Ensign, Forest C. Evolution of the high-school principalship. School review, 31: 179-90, March, 1923.

Traces the historical development of the secondary school principalship.

Hudelson, Earl. The profession of principal. School review, 30: 15-23, January, 1922.

Presents principal's opinion of academic and professional status of high-school teachers, practice of conducting teachers' meetings, and of supervision of instruction.

Irby, Nolen Meaders. What is the status of the high-school principal in Arkansas? Master's thesis, George Peabody college for teachers. 1925.

Simple statistical devices are used in this study to determine the typical Arkansas high-school principal in terms of personal equipment, participation in administration, participation in supervision, professional growth, direction of the social activities of pupils, and participation in the social and civic life of his community.

Jacobs, Walter Ballou. The status of the New England high-school principal. School review, 32: 371-79, May, 1924.

Reports on the results of a questionnaire study which secured returns from 238 high-school principals of New England concerning personal characteristics, education, experience, school leadership, educational leadership, community leadership, reading and recreation of high-school principals.

John, Rolland Richardson. The distribution of the principal's time in California high schools. Master's thesis, University of California. December, 1922.

— The principal's load. School review, 31: 748-55, December, 1923.

Reports on results of a questionnaire study which secured returns from 125 high-school principals of California, showing by size of school the amount of time given by principals to specified duties.

Sellers, Hilton Addison. A study of county superintendents and county high-school principals in Alabama. Master's thesis, George Peabody college for teachers. 1924.

This is a comparative study of county superintendents and high-school principals in Alabama, with respect to qualifications possessed and salaries received, with special consideration to the recent effects of agitation and legislation.

Waples, Douglas. Can high-school principals improve the college training program? Educational administration and supervision, 8: 457-62, November, 1922.

Reports on high-school principals' judgments of the relative value of professional courses in education. Returns from 119 Massachusetts high-school principals are used.

PUPILS

ACHIEVEMENT

Cobb, Margaret V. The limits set to educational achievements by limited intelligence. Journal of educational research. 13: 546-47.

Attempts to discover what degree of intelligence is required successfully to handle various high-school subjects.

Deich, Charles, and Jones, Elmer E. A study of distinguished high-school pupils in Iowa. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 46.)

As result of questionnaire sent to all four-year high schools of the state 316 representative senior students were selected. Data such as common school ratings, achievement by grades and average for entire course, average ratings for entire class, home conditions—financial, social, educational—nativity, occupations, of parents, their nationality, physical conditions, outside activities, habits of study, etc., concerning these were secured. Includes interpretation of data and bibliography on gifted children.

Hughes, W. Hardin. A personnel and achievement study of a high-school graduating class and its college entrants. Pasadena city schools. Educational research bulletin, vol. 8, nos. 1-2, October, 1924.

Gives data showing comparative trait ratings of honor scholarship students and all high-school seniors; college entrants and all high-school seniors; relation of high-school intelligence quotients and college achievement to trait ratings; relation of university intelligence scores and achievement to trait ratings; relation of rank in intelligence scores to rank in university achievement; and relation of trait ratings and intelligence test scores to college success. A positive correlation of all traits combined with scholarship of college seniors ranging from 0.30 in the University of California to 0.18 in Occidental college is found.

Hull, J. D. A comparison of the grades and intelligence quotients of athletes and nonathletes in high school. School board journal, 69:44, 107-8, August, 1924.

Athletes of Sullivan, Ind., high school, in 1922-23, compared with nonathletes. Terman group test A and B used. Correlation of 0.863 obtained with forms A and B. The nonathletes did better school work than the athletes. However, the athletes worked more in accordance with their capacities than the nonathletes. This is because many nonathletes with low I. Qs. made high grades.

Jennings, Doris. A comparative study of the I. Q. and scholastic achievement of high-school students. Master's thesis, George Peabody college for teachers. 1924.

A study of the students of Davidson County high school. A comparison drawn between intelligence quotients, and scores in spelling, composition and reading.

Madsen, I. N. Relationship between general intelligence and success in certain high-school subjects. Journal of educational research, 3:396-98, May, 1921.

Army alpha tests given to high-school students in Omaha high schools. Results in tables. Concludes that it is desirable to test prospective high-school students as to their capacities before election of subjects is permitted.

Newcomb, Edith I. A comparison of Latin and non-Latin groups in high school. Teachers college record, 23:413-22, November, 1922.

Comparisons of reading abilities were made through the use of the Thorndike-McCall reading scale, and a study of word knowledge and knowledge of grammar and a comparison of general intelligence of Latin and non-Latin groups were made.

Powers, Samuel B. A comparison of the intelligence and the achievement of high-school boys who smoke with those who do not smoke. School and society, 13:299-300, March, 1921.

Results of three mental tests given at University high school, Arkansas university. Boys who smoked were 15 per cent lower than the others, and 30 per cent lower in ability to do school work.

Sangren, Paul V. Social rating of best and poorest high-school students. Journal of educational psychology, 14:209-14, April, 1923.

A study of 165 high-school students at Zeeland, Mich. A scale was constructed modeled after Form B of Rugg's rating scale, and Terman's group test used. High correlations given; and concludes that scholarship of high-school students is determined by methods of work, application, industry, attitude, and ability to assimilate; the best students possess a greater degree of the qualities which will make for success in the practical world, etc.

Scovell, Bernice Bowman. Study of high-school absences in relation to grades and mental ratings. Master's thesis, University of California. 1922.

Wren, Frank L. Intelligence, an index of achievement. Master's thesis, George Peabody college for teachers. 1925.

A study to determine in a limited field whether intelligence as defined by I. Q. may be used as a criterion for estimating school achievement. A distinctive feature of this thesis is a computation of partial correlations by means of determinants. The study seems to show that I. Q. is not a true criterion for estimating achievement in school subjects.

FAILURE AND ELIMINATION

Devaul, Adelbert. Causes of classroom failure. Master's thesis, University of California. 1921.

Eaton, Harold T. The intelligence of pupils who repeat. School and society, 17: 139-40, February 3, 1923.

Studies the intelligence of pupils in Syracuse high school who repeat courses. Finds that lack of mental ability explained only 57 per cent of cases.

Edmonson, J. B. Why high-school pupils fail in high school. School review, 33: 402-404, June, 1925.

Feingold, Gustave A. Intelligence and persistency in high-school attendance. School and society, 18: 443-50, October, 13, 1923.

Studies in Hartford, Conn., high school, general survival tendencies, 1890 to 1922, factors that make for persistence, types of pupils who persist, type of school work done by inferior freshmen, and relation of intelligence to occupation of father. Finds that lack of ability is highly correlated with elimination.

——— Mental analysis of high-school failures. Educational administration and supervision, January, 1923, p. 24.

An analysis of 3,023 pupils in Hartford public high school. Mental tests given on entrance and again at the beginning of the junior year. Major failures due to lack of ability and lack of industry. Mentally backward pupils leave high school in increasing numbers in successive years while shirkers keep up their attendance. Junior year is critical. Tables and explanations given.

Fristoe, John D. A study of failures and retentions in mathematics as compared with failures and retentions in other subjects in the high schools of Kansas City, Mo. Master's thesis, University of California. December, 1922.

Hamilton, Robin Lynn. Undeveloped resources: Some studies in group intelligence in Sioux City (Iowa) high school. School and society, 16: 416-20, October 7, 1922.

Studies results of Army alpha testing in Sioux City (Iowa) high school with reference to survival, and grades. Concludes that mentality is most decisive factor in determining graduation, that some subjects require higher mentality than others and that an Army alpha rating of B is necessary for graduation.

McCormick, B. E. A study of failures. School review, 30: 431-42, June, 1922.

Studies failures in LaCrosse (Wis.) high school. Shows percentage of failure by semesters in different years, by subjects, by teachers of the same subject, by reasons as reported by teachers. Finds that failure is most influenced by working attitudes, out of school study habits, teacher-pupil and teacher-parent attitudes and personality, training, and professional attitude of teachers.

Northwest association of secondary and higher schools. Committee report, April 11, 1925. Student mortality in secondary and higher schools of the Inland Empire.

Analyzes data from 10 typical medium sized high schools, with a total freshman enrollment of 10,805 pupils, for a four-year period, and from 18 higher institutions showing tendencies in elimination.

Beavis, William C. The administration of failing pupils in the high schools of Seattle, Wash. *School review*, 33: 28-34, January, 1925.

Studies per cent of failure, relation of age to failure, relation of chronological to mental age of failing pupils, and reasons ascribed by pupils for failure.

Smith, Harvey A. A study of high-school failures and their causes. *Educational administration and supervision*, 8: 557-72, December, 1922.

Introduces data on failure from a high school enrolling approximately 300 pupils and analyzes data to determine causes of failure.

Walls, W. A. Relation of intelligence to failures in school. *School board journal*, 70: 53, March, 1925.

A study of a small city school system, Kent, Ohio. Two hundred and sixty senior-high school and 175 junior high-school pupils. Intelligence tests given for three years. Low intelligence is not a reason for failure in the senior high school. Tables and causes of failure shown.

Westcott, H. S. Statistical determination of psychological, sociological, and economic causes of elimination of high-school pupils. Master's essay, Yale university.

Wood, O. A. A failure class in algebra. *School review*, 28: 41-49, January, 1920.

A study of a class of failures in algebra which shows a fundamental relation between failure and repetition in algebra and a low grade of intelligence. This relation is shown by the high correlation between these two traits. The writer believes that these classes should be eliminated as they are maintained at a waste of public school funds. Further, pupils below normal general intelligence should be prohibited from taking algebra.

GENERAL

Alltucker, Margaret M. Is the pedagogically accelerated student a misfit in the senior high school? *School review*, 32: 193-202, March, 1924.

Analyzes data on 135 cases and concludes that the pedagogically accelerated child is not a serious misfit in high school.

Ames, C. Garfield. Educational and vocational diagnoses of 61 Berkeley high-school boys based upon case histories. Master's thesis, University of California. 1920.

Burdge, Howard G. Our boys. State of New York military training commission. Bureau of vocational training. [Albany, N. Y. J. B. Lyon co., printers, 1921.]

This study analyzes data on number, nationality, schooling, home environment, employment, opportunities for advancement, and future aims of 16, 17, and 18 year old employed boys in New York state.

Cameron, Annie E. A comparative study of mathematical ability of boys and girls in secondary schools. *British journal of psychology*, 29: July, 1925.

When mathematical ability is taken as a whole there appears to be no significant sex difference.

Clem, Orlie M. Latin prognosis: A study of the detailed factors of individual pupils. *Journal of educational psychology*, 16: 160-69, March, 1925.

Tests given 398 Latin students of Boys' high school, Brooklyn, N. Y.; Wadleigh high school, New York city; and DeWitt Clinton school, New York city. Average age, 14. What factors influence pupils' success in first-year Latin. Sixteen factors discussed and correlations given.

Factors predetermining success in typewriting. Public school messenger (St. Louis, Mo.), 21: 20, May, 1924.

A study of 332 pupils in Cleveland (Mo.) high school using a typewriting test devised and administered, with results. This test gives a fairly good prognosis of the ability to learn typewriting. The IQ furnishes a good indication of ability to acquire typewriting skill, and these two factors together form an almost perfect prognosis as less than 2 per cent failed to bear out the indications. Time element is not so important a factor as has been supposed.

Flinner, Ira A. Rating students on the basis of native capacity and accomplishment. Educational administration and supervision, February, 1923. p. 87.

A study in individual differences of 300 boys in Huntington school, based on Otis A & B tests and teachers' estimates, and checked by Stanford revision of Binet-Simon. Ability-index obtained and used as a measure of efficiency for all students.

Horn, John Louis. Caring for highly endowed pupils. School review, 29: 776-81, December, 1921.

- A study of 1,173 school children of Oakland, Calif. Economic pressure prevented 24 from going to high school. The general median was 91 (top score 155). Of the 24, four students scored above 138. A plea is made to support the highly endowed children of economically incompetent parents through their years of schooling.

Hutson, Percival W. Some measures of the musical training and desires of high-school seniors and their parents. School review, 30: 604-12, October, 1922.

A questionnaire on music given a graduating class of Central high school. Minneapolis, Minn., in June, 1921.

McGrath, Marie Cecelia. A study of the moral development of children. Psychological review publications, no. 2, 1923.

The study presents standardized tests of moral information and attempts to establish the time and order in which the child appreciates moral concepts. Subjects were drawn from public and parochial schools.

Miklan, Margaret. The group in secondary education as a means of developing social consciousness. Master's thesis, University of California. May, 1923.

O'Brien, F. P. The vocabulary of high-school pupils. Journal of educational research, 11: 344-50, May, 1925.

Analyzes vocabulary as used by 2,542 students in the junior and senior high schools.

Perry, Clarence Arthur. Frequency of attendance of high-school students at the movies. School review, 31: 573-87, October, 1923.

Reports on a questionnaire study which secured data from 37,505 pupils concerning habits of attending movies.

Powers, Samuel B. Intelligence as a factor in the election of high-school subjects. School review, 30: 452-5, June, 1922.

Paper showing subject elections of fourth and first quartile pupils according to intelligence. Concludes that in a school which has neglected guidance, superior pupils elect studies demanding the greatest intellectual power while inferior pupils elect studies demanding manual dexterity.

Pyle, W. H. The relation of sex differences to the kind of material used. Journal of educational psychology, 16: 261-64, April, 1925.

Studies relative ideational learning abilities of boys and girls from results of four tests involving different kinds of materials.

Roemer, Joseph. Function of secondary education. George Peabody college for teachers. Contributions to education, no. 1, 1920.

A study of the services rendered the state of Tennessee by the first-class county high schools. From a questionnaire to the seniors in 61 first-class county high schools, one to the graduates of the previous year, and one to the pupils who had dropped out during the three previous years, a study is made of the vocational opportunities of the pupils, the probable vocations of the pupils, the training needed by the pupils, the causes of elimination, and the pupils' estimates of the value of high-school education. A critical study of the program of studies.

Bohn, Ross W., and Briggs, Thomas H. Intelligence and literature. School and society, 18: 508-510, October 27, 1923.

A report of a study made in a small New Jersey high school, of intelligence of pupils in relation to the quality and quantity of their reading both voluntary and required.

Watson, Stella Mary. A study of the high-school student's literary interests. Master's thesis, University of California. May, 1925.

Windes, E. E. High-school education of the farm population in selected states. Washington, D. C., Government printing office, 1925. (U. S. Bureau of education. Bulletin, 1925, no. 6.)

Comparative data for North Dakota, South Carolina, Montana, Oregon, Maine, and New Hampshire on secondary age population group classified as to farm or nonfarm, sex, enrollment in high school, race or nativity; number of high schools; age-grade distribution; comparative intelligence; relation of high-school enrollment and persistence to quality of education provided for the farm population; relation to employment of farm boys; relation to population distribution.

INTELLIGENCE

Adams, Frederick Joseph. Intelligence survey of rural school system. Master's thesis, University of California. 1921.

Allen, William Orville. Who shall go to college? School and society, 19: 230-32, February 23, 1924.

Reports on the results of an investigation of the intelligence of Pennsylvania high-school seniors using the Brown psychological examination and making comparisons with Colvin's Massachusetts study. Finds that 28 per cent of Pennsylvania seniors are good college risks as measured by Brown university norms.

Almack, John C., and Almack, James L. Gifted pupils in the high school. School and society, 14: 227-28, September 24, 1921.

The Army alpha group test was given to 776 students and those making a score of less than 110 were rejected. Concludes that 8 per cent of the school population of the six upper grades were possessed of superior ability; may be discovered through the use of a group test; Binet test has decided limitations among the able students; come from superior homes, etc.

— Superior types in the high school. Education, 42: 352-58, February, 1922.

Results on 51 pupils of the 776 in grades 7 to 12 at Eugene, Oreg., selected by mental tests, physical and medical examination, and other data. Ten case studies. Conclusions.

Anderson, John E. The intelligence of a highly selected group. School and society, 16: 723-25, December 23, 1922.

Compares intelligence as determined by Army alpha test in Hotchkiss school of Lakeville, Conn., with intelligence of public high-school pupils. Finds Hotchkiss pupils very superior.

Baldwin, Bird T. Mental growth curve of normal and superior children. University of Iowa studies, no. 56, January 1, 1922.

Studies the mental growth curve of normal and superior children of ages 0-14 years by means of consecutive intelligence examinations. Concludes that the I. Q. is only approximately constant, that it is possible to predict later development early by mental examinations, that there is a close interrelation between mental and physical development and that mental age ratings by the present Binet scale are the result of not only native intelligence but also of the degree of physiological acceleration over that which is normal for the age.

Book, William F. The intelligence of high-school seniors as revealed by a state-wide mental survey of Indiana high schools. New York, Macmillan co., 1922.

A book giving in detail a state-wide survey of high-school seniors. (2,477 boys and 3,711 girls) of Indiana. Studies range and distribution of scores made on the Indiana university intelligence scale D, showing scores of seniors going to colleges, accelerated, retarded, or regularly promoted, making excellent, average or poor scholastic record; selecting different occupational careers; pursuing different courses; preferring different high-school subjects; belonging to different occupational classes; coming from different economic strata in society; coming from different communities and schools; and by sex. Recommendations.

Bright, Ida J. The intelligence examination for high-school freshmen. Journal of educational research, 4: 44-55, June, 1921.

Uses Terman group test. Tabulates results for students in Latin, English, algebra, etc., and concludes that the test is useful for predicting success of first year high-school pupils; clarifying teacher's problems; grouping pupils; aiding in distributing scholarship grades; and motivation.

Chassel, Clara F. The results of the Thorndike intelligence examination in the senior class of the Horace Mann high school for girls. School and society, 15: 511-12, May 6, 1922.

Cleveland, Elizabeth. Some further studies of gifted children. Journal of educational research, 4: 195-99, October, 1921.

Includes a follow-up report on 47 high-school pupils formerly members of gifted groups.

Colvin, Stephen S., and McPhail, Andrew H. Intelligence of seniors in high schools of Massachusetts. Washington, D. C., Government printing office, 1924. (U. S. Bureau of education. Bulletin, 1924, no. 9.)

Study based on examination of 3,333 seniors (1,262 boys and 2,071 girls) selected from representative high schools to discover ability for college training. Analyses of intelligence scores, data as to college expectation, reasons for not continuing education, chosen occupations or careers, ages, occupations, intelligence and financial status of parents.

Coxe, Warren W. School variation in general intelligence. Journal of educational research, 4: 187-94, October, 1921.

Otis group tests given in 24 sixth grades in 24 elementary schools in Cincinnati in order to select candidates for a six-year classical high school with a minimum I. Q. of 110.

Dye, Erma Pepple. A comparison of the abilities of high-school pupils in commercial and academic courses. Master's thesis, University of Wisconsin, 1924.

Gillingham, Anna. Superior children—their school progress. Journal of educational psychology, 11: 327-47, September, 1920.

A paper on pupils of the Ethical culture school of New York city. Army alpha tests given to children in elementary grades for five years past and other tests, together with 20 individual descriptions of superior children.

Gordon, George B. A study of intelligence differences of rural and city high-school children on the basis of the Army alpha tests. Master's thesis, Ohio state university. 1923.

Compares intelligence differences of rural and urban junior and senior high-school children of Minnesota. Data are presented for 2,168 urban children in nine cities and for 2,730 children in villages of less than 2,500 population.

Henmon, V. A. C., and Livingston, W. F. Comparative variability at different ages. *Journal of educational psychology*, 13: 17-29, January, 1922.

An examination of the comparative variabilities as revealed in some of the most representative studies of mental and physical development, using a large number of cases in which the variabilities had been determined, and in which norms for a wide range of ages were available. Variability in physical traits; mental traits; mental traits by grades; and by sex is shown. Increasing variability at adolescence not found for mental traits.

Hinds, James H. A comparison of the brightness of country and city high-school children. *Journal of educational research*, 5: 120-24, February, 1922.

Tests were made in every type of school in Texas. The country child is lower in general mentality as measured by the group mental test, than the city child.

Hopkins, L. L. The intelligence of continuation-school children in Massachusetts. *Harvard studies in education* V.

Studies through the Pearson general intelligence test, series II, the comparative intelligence of Massachusetts pupils 14 to 16 years old in regular day schools and in continuation schools. Concludes that continuation school children are inferior, that schools are not making provision for brighter pupils, that schools are trying to put pupils through a common mold, that economic factors are not an important cause for leaving school, and that the school system is defeating its own ends. The study also summarizes findings of previous studies on the relation of intelligence to school elimination.

Keener, E. E. Mental ability of freshmen high-school pupils. *Journal of educational research*, 11: 113-22, February, 1925.

Compares mental ability of beginning freshmen pupils in the 26 high schools of Chicago, September, 1923. A statistical study.

Kohlhoff, Carl Henry. A comparative study of the abilities of commercial and academic high-school pupils. Master's thesis, University of Wisconsin. 1924.

Madsen, I. N. Intelligence as a factor in school progress. *School and society*, 15: 283-88, March 11, 1922.

Studies intelligence by grades in Idaho schools in centers ranging from 500 to 10,000 in population, and in high schools in Madison, Wis.; Rockford, Ill.; Sioux City, Iowa; and Omaha, Nebr. Finds that a high degree of brightness makes for better grade progress.

— High-school students' intelligence ratings according to the Army alpha test. *School and society*, 11: 298-300, March 6, 1920.

Shows that the younger students in each class make the best scores and there is an increase in score with each of the four high-school years, showing that it requires greater native intelligence to reach one of the upper classes at the age of 15 than to remain in the freshman class at that age. That average intelligence is not sufficient to do satisfactory high-school work is shown by both Binet and Army tests.

Martens, Elise H. A study of individual retest. University of California. Bureau of educational research. Study no. 7.

Murdock, Katherine, and Sullivan, Louis R. Some evidence of an adolescent increase in the rate of mental growth. *Journal of educational psychology*, 13: 350-56, September, 1922.

Uses records of 580 boys and girls from 16 to 18 years of age, Punahou school, Honolulu, Hawaii. Terman group test used for the high-school grades. Anthropological data collected. From 8 to 13 the girls excel physically and mentally. Thereafter they are behind the boys. The greatest difference occurs at the age 13, where girls are seen to excel the boys mentally by an average of 2.4 I. Q. points. Changes in the rate of mental growth are revealed by the use of mental scales and related to sex differences.

Ramsey, J. W. A study of the intelligence of the Paragould, Ark., high school pupils. Master's thesis, George Peabody College, Nashville, Tenn. 1921.

An analysis of relationship between intelligence tests, teachers marks, and rating on standard tests, of 192 high-school students. Three distinct pupil groups are pointed out and recommendations made for administering instruction to them.

Schwegler, R. A., and Winn, Edith. A comparative study of the intelligence of white and colored children. *Journal of educational research*, 2: 838-48, December, 1920.

The negro child does not function in the American school as the white child does. The median intellectual endowment of the colored group studied is about 85 per cent of that of the white group. The groups studied were 716 pupils from the seventh and eighth grades of the Junior high school of Lawrence, Kans. The total colored enrollment was 24 boys and 34 girls.

Sheldon, William H. The intelligence of Mexican children. *School and society*, 13: 139-42, February 2, 1924.

The study finds that the average Mexican child is 14 months below normal mental development for white children of same age and school environment; that Mexican children are less intelligent than American, English, Hebrew, and Chinese children, but more intelligent than Indian, Slavic, Italian, and negro children; and that chronological age varies inversely with mental age for children.

Symonds, Percival M. A second approximation to the curve of the distribution of intelligence of the population of the United States, with a note on the Stanford revision of the Binet-Simon scale. *Journal of educational psychology*, 14: 65-81, February, 1923.

The study states the method employed and concludes that a distribution of intelligence on the basis of occupational intelligence standards compares very closely in mean and variability with that found in the Army testing program. Concludes also that for purposes of measuring general adult intelligence the Binet-Simon test should be restandardized.

Thorndike, Edward L. Changes in the quality of pupils entering high school. *School review*, 30: 355-59, May, 1922.

Shows the changes in experience, abilities, and interests that have been brought about by the large increase in secondary school enrollments in the last 25 years.

— Intelligence scores of colored pupils in high schools. *School and society*, 18: 569-70, November 10, 1923.

Reports results of an intelligence testing program in a large high school of the North central division using the I. E. R. tests of selective and relational thinking. A decided inferiority of mental ability is shown for colored pupils.

— On the improvement in intelligence scores from 14 to 18. *Journal of educational psychology*, 14: 513-16, December, 1923.

This is a report on the study of about 8,000 pupils in grades 10, 11, and 12, in an attempt to learn whether intelligence increases during this period.

Thorndike, Edward L., and Bregman, E. O. On the form of distribution of intellect in the ninth grade. *Journal of educational research*, 10: 271-78, November, 1924.

Uses the results of different tests of intelligence in various cities to determine the form of distribution of intellect in the ninth grade. Concludes that the intelligence of ninth-grade pupils is distributed closely in accord with the theoretical normal curve of distribution.

Van Amringe, Edwin V. Thorndike intelligence examination for high-school graduates and marks received in the university. Master's thesis, University of California. May, 1923.

Willard, Dudley W. Native and acquired mental ability as measured by the Terman group test of mental ability. *School and society*, 16: 750-56, December 30, 1922.

Finds that growth of abilities measured by the Terman test is due in part to native capacity and in part to training.

Williams, Allen J. Age-grade distribution and intelligence quotient. *Journal of educational psychology*, 2: 39-44, January, 1920.

The problem of over-age in the fourth and fifth grades. A survey of pupils in the Brewster school (N. Y.) from the fourth grade through the high school as measured by the Otis group intelligence scale.

Yates, Dorothy Hazeltine. A study of some high-school seniors of exceptional intelligence. Master's thesis, University of California. 1921.

— A study of 20 high-school seniors of superior intelligence. *Journal of educational psychology*, 11: 264-74, May, June, 1920.

Otis group tests given to 543 high-school seniors of Oakland, Calif., March, 1919. The 20 highest pupils in the test were selected for study and for comparison; 20 median pupils were selected. Concludes that: Mentally superior pupils come from favorable environment; are physically as well as mentally precocious; have average health or better; are employed less and read more; have more intellectual interests; and that both superior and average pupils have similar vocational aims.

PHYSICAL TRAITS AND GROWTH

Balch, Henrietta. Relation of physical fitness to intelligence quotients, scholarship averages, and chronological age of 400 high-school girls. Master's thesis, University of California. December, 1924.

Baldwin, Bird T. The relation between mental and physical growth. Iowa child welfare research station, Iowa City, Iowa.

Studies the relation between mental and physical growth from data on 2,500 individuals for 30 physical traits with consecutive measurements on nude children of from 18 to 24 semiannual intervals. Concludes that there is a significant positive correlation between physiological and mental age.

— The use and abuse of weight-height-age tables as indexes of health and nutrition. Iowa child welfare research station, Iowa City, Iowa.

Gives weight, height, and age tables for boys and girls of school age with suggestions for use and discusses variability and gains in growth.

Sandwich, E. L. Correlation of physical health and mental efficiency. *Journal of educational research*, 1: 199-203, March, 1920.

A study made in one school of the relation between mental intelligence and comparative freedom from physical defects; 423 students tested showed that good intellectual ability is accompanied by good physical ability.

PROGRESS

Ayer, Fred C. Progress of pupils. Seattle, Wash., Bureau of educational research.

Studies the progress of pupils in Seattle elementary and secondary schools. Gives for high schools age-grade distribution, comparative holding power of Seattle and 33 large cities, comparative age-grade data for the several Seattle high schools and the number and percentage of seniors in a typical Seattle school taking work in freshman or sophomore classes.

Corson, David B. Retardation in high schools. A report to the committee on instruction. Newark, N. J., Board of education.

Reports for the several high schools of Newark, by subject and grade, the number of pupils taking subject first, second, third, and fourth time; number of pupils taking second time 1, 2, 3, 4 or 5 major subjects; number of pupils taking third time, 1, 2, 3 or 4 major subjects; number of pupils taking fourth time, 1, 2, 3 or 4 major subjects; number of pupils reaching given grade in specified number of terms; number of pupils retarded in each high school by elementary schools with amount of retardation. The study shows a high degree of retardation and recommends certain rules by the board of education looking towards closing the high schools to pupils who have a habit of failure due to unwillingness or inability to do work.

Ellis, Robert S. Army alpha scores in relation to progress in the high school and to mental growth. *School and society*, 22: 439-40, October 3, 1925.

In April, 1921, all students in one high school of Knoxville, Tenn., were given Army alpha. After all classes had graduated class norms were determined for the members of each class who graduated. Compares freshmen who graduated with those who did not; relation of age to elimination; median scores by ages and school years for groups that graduated with their classes.

Haney, E. M., and Uhl, W. L. Academic records of accelerated students. Twenty-third yearbook of the National society for the study of education, 1924. p. 323.

Several types of acceleration are mentioned—early entrance, skipping grades, carrying more than regular amount of work in high school, etc. More careful selection would reduce, if not eliminate, the academic failures cited in the paper. Effective guidance is essential.

Maryland. State department of education. Progress in reduction of overage pupils in Maryland counties. Baltimore, Md., State department of education, June, 1924.

Gives data on tendencies in retardation for Maryland counties, for boys versus girls, rural versus graded schools, elementary and high schools and for white and colored pupils.

Odell, Charles W. The progress and elimination of school children in Illinois. University of Illinois. Bureau of educational research. Bulletin, no. 19, 1924.

Studies data on progress and elimination of school children from 82 elementary school systems and 51 high schools of Illinois. Finds that the average child in Illinois systems operating both elementary and high schools requires slightly over 13 years to complete the course.

Weisel, G. H. Retention in schools. Master's thesis, Indiana university. 1924.

SOCIAL TRAITS

Bennett, H. S., and Jones, B. B. Leadership in relation to intelligence. *School review*, 31: 125-28, February, 1923.

Twenty-nine pupils studied in Rochester shop school. A positive correlation between intelligence and leadership is shown by comparison of ratings on Otis group intelligence test and estimates of leadership.

Clayton, F. T. Home conditions of study and pupil attitude towards school work. *School and society*, 17: 221-24, February 24, 1925.

Studies home conditions of study and school attitudes of pupils of grades 9, 10, 11, and 12 of a six-year high school of New Hampshire. Finds that girls are more contented with the school atmosphere than boys and uniformly give more time to school tasks. Finds also a growing discontent with school conditions from grade to grade.

Counts, George S. The selective character of American secondary education. University of Chicago. Supplementary educational monograph no. 19, 1922.

Frederick, B. W. An investigation into some social attitudes of high-school students. Master's essay, Yale university. 1924.

Freeman, Frank N. Tests of personality traits. *School review*, 33: 95-106, February, 1925.

A discussion of tests for will-temperament, emotional temperament, moral disposition, and aesthetic sensibility.

Hart, Hornell N., and Olander, Elmer. Sex differences in character as indicated by teachers' ratings. *School and society*, 20: 381-82, September 20, 1924.

Gives comparative ratings on boys and girls of Davenport, Iowa, on sincerity, kindness, self-control, honesty, energy, and intelligence as traits of character. Girls were given a markedly higher average rating.

Hughes, W. Hardin. Organized personnel research and its bearing on high-school problems. *Journal of educational research*, 10: 386-98, December, 1924.

Presents the results of research on Pasadena high-school pupils concerning the relation of intelligence to trait ratings. Reports coefficient of correlation for 12 traits with intelligence. Also correlation of composite teacher ratings of mental ability with Terman group test.

Personnel study of junior college freshmen. *Educational research bulletin*, Pasadena (Calif.) city schools, vol. 3, no. 5, January, 1925.

Gives data on vocational activities preferred, working conditions preferred, and self-ratings on 38 desirable traits for Pasadena junior college freshmen. Also compares Pasadena high-school seniors and junior college freshmen on individual social traits and intelligence.

Mitchell, Claude. Pupils' standards of judging citizenship. *School review*, 33: 382-86, May, 1925.

Describes the method followed in West Newton, Pa., in an effort to determine pupils' standards of judging citizenship. The writer concludes that high schools are making better citizens; that moral standards of girls are higher than those of boys; that pupils despise intemperance most and dishonesty least.

Shipley, Arthur Hayes. A study of secondary school students of eminent parentage. Master's thesis, University of California. May, 1925.

Sims, V. M. A scale for measuring certain aspects of socio-economic status. Master's essay, Yale university. 1925.

Material gathered from secondary school students.

Waples, Douglas. Indexing the qualifications of different social groups for an academic curriculum. *School review*, 32: 537-46, September, 1924.

Analyzes the social characteristics of Homestead, Pa., high-school pupils and sets up criteria for assignment to an academic curriculum.

RELATION OF SECONDARY AND HIGHER SCHOOLS

Breeze, Retha Edith. Secondary schools and college preparation. Master's thesis, George Peabody college for teachers. 1921.

A study of 1,303 freshmen students entering Vanderbilt university during the 10-year period 1910-1911 through 1919-1920 to determine the achievements of high schools in preparing students for college.

Breitwieser, J. V. Thorndike college entrance tests in the University of California. University of California, High-school service bulletin, 1922. 2.

College entrance examination board. Twenty-fourth annual report of the secretary. New York, published by the board, 1924. 163 p.

The report analyzes statistical data of its examinations for the period 1916-1924.

Davis, Calvin Olin. The secondary schools accredited by the North central association. Special report of the North central association, 1925. Also in abridged form in Proceedings of the North central association, Part I, 1925, p. 46-65.

Davis, Jesse B. The influence of college entrance requirements on the public high schools of New England. School review, 31: 445-51, June, 1923.

Reports on a questionnaire study involving 528 New England high schools representing all the New England States. Shows survival to graduation, per cent of pupils entering colleges in various ways and who entered employment, percentages preparing for A. B. or B. S. courses in college, and a survey of opinion of high-school principals as to whether college preparation is a handicap for the high school.

Edmonson, J. B. Differences and similarities in standards for accrediting high schools for the purpose of admission of students to higher institutions. High school quarterly, 10: 178-84, April, 1922.

— Tentative standards for non-8-4 schools. Twenty-sixth annual meeting of the North central association of colleges and secondary schools. Proceedings, Part I, 1921, p. 70-76.

Ferry, Frederick C. The divergence in the interpretation of entrance units. Educational record, 5: 247-53, October, 1924.

A study showing variability of practice in interpreting units of credit for secondary school work.

Fort, L. M. College-admission requirements in the North central association. School review, 31: 680-84, November, 1923.

• Reports on a questionnaire study which secured returns from 202 institutions of higher learning in the North central association concerning requirements for admission in specific subjects and practice of allowing credit for certain newer subjects.

Furst, Clyde. Certificates of college entrance. Educational record, 5: 242-46, October, 1924.

A study summarizing the important changes in the data afforded by college entrance certificates, 1916 to 1922.

— College entrance requirements. Association of American colleges. Bulletin, vol. 7, March, 1921.

Summarizes from data from 125 institutions on the list of the Association of American universities for 1918 practices and tendencies in college entrance requirements.

— Entrance to college in Massachusetts in 1922. Association of American colleges. Bulletin no. 4, November, 1923.

A general study of entering pupils and conditions of admission in Massachusetts colleges.

John, Walton C. Requirements for the bachelor's degree. Washington, D. C., Government printing office, 1920. (U. S. Bureau of education. Bulletin, 1920, no. 7.)

Fifty colleges and universities included in the study. Sets forth the development of entrance requirements from the colonial period. Includes an analysis and summary of requirements in the 50 schools studied as to age, physical fitness, moral integrity, and intellectual attainment, the latter by subjects.

Koos, Leonard V. The flexibility of requirements for admission to colleges East and West. School review, 28: 436-50, June, 1920.

Compares entrance requirements in eastern and western colleges. Finds greater flexibility of entrance requirements of western colleges and points out that this flexibility permits a certain degree of curriculum experimentation.

Nelson, Martin John The Thorndike intelligence examination for high-school graduates as a criterion for predicting college success. Master's thesis, University of Wisconsin. 1924.

Payne, Martha. Accredited relations between universities and secondary schools. Master's thesis, University of Kentucky.

A comprehensive survey of the relations between secondary schools and colleges and the effects of such relations. Secondary education is traced from its beginnings through 1918.

Rivett, B. J. Marks of students in high school and higher institutions. School review, 32: 752-6, December, 1924.

Compares marks of graduates of Detroit high schools in high school and in Detroit colleges. Concludes that high-school marks predict accurately what may be expected in colleges. Data involve 1,200 pupils.

Rogers, Lester Burton, and others. Reports of the committee on college relations. Ninth yearbook of the National association of secondary school principals, 1925.

Studies high-school grades and proportion of nonacademic high-school units in the total offered for admission as a basis for predicting college success from data from the University of California. Summarizes other studies showing comparative value of intelligence scores, examinations and secondary school marks for purposes of predicting college scores. Concludes that content examinations are slightly more valuable than high-school marks for prediction of success in college but are less satisfactory than other measures now available.

Scates, Douglas E. A study of high school and first-year university grades. School review, 32: 182-92, March, 1924.

Studies the grades of first-year students in the University of Chicago and the relation of these grades to high-school record. Finds a correlation of 0.64 ± 0.01 between high school and first-year college grades. Concludes that to raise qualitative entrance requirements would fail such a large number of students who do satisfactory work that it could not be justified.

Thornberg, Lester H. College scholarship and size of high school. School and society, 20: 189-92, August 9, 1924.

Summarizes data from a thesis written at the State college of Washington showing that students in colleges from large high schools are superior in scholarship to those from small high schools.

Zook, George F. Accredited secondary schools in the United States. Washington, D. C., Government printing office, 1922. (U. S. Bureau of education. Bulletin, 1922, no. 11.)

Outlines requirements of accrediting agencies and methods of accrediting; lists all accredited secondary schools state by state.

SCHOOLS

SCHOOL AND COMMUNITY

Parsons, R. B. A study of current practice as to parent-teacher associations. School review, 29: 688-94, November, 1921.

Gives data from 51 schools in 21 states concerning practices of parent-teacher associations.

SCHOOLS

CONTINUATION AND PART-TIME

Alltucker, Margaret M. Coordination in part-time education. University of California. Division of vocational education. Bulletin no. 3, 1921.

Bartlett, Bessie Rogers. Case study of two part-time school girls in American photo players company, Berkeley; an example of counsel in part-time education. Master's thesis, University of California. 1922.

Berry, Ralph E. Administration of the part-time school in the small community. University of California. Division of vocational education. Bulletin no. 13, 1924. 2 parts.

Broadwell, Georgiana L. Coordinator for girls; part-time education. Master's thesis, University of California. September, 1923.

Campion, H. A. Third annual report of the Department of part-time education, Stockton, Calif., 1921-22. University of California. Division of vocational education. Bulletin no. 10, 1922.

National education association. Commission on the reorganization of secondary education. Part-time education of various types. Washington, D. C., Government printing office, 1921. (U. S. Bureau of education. Bulletin, 1921, no. 5.)

Report presents a study of the various types of part-time and continuation education and recommendations for carrying out the same. It is based largely upon an analysis made in 1918 for the high-school masters' club of Massachusetts. Appendix A sets forth types of part-time education recognized by Federal act of February 23, 1917; Appendix B, a summary of laws of the 10 states requiring continuation education.

Patty, Willard W. Opportunities for vocational education in California evening high schools. Master's thesis, University of California. 1920.

Todd, Margaret M. Some phases of part-time education. Master's thesis, University of Kentucky.

The study deals with the history, function, and development of the several types of part-time schools.

University of California. Vocational education division. Part-time and continuation schools abroad. Bulletin, 1921, no. 6.

——— Syllabus of an introductory course on part-time education. Bulletin, 1920, no. 1.

Wheeler, Jerome Julius. Public continuation schools. Master's thesis, Pennsylvania state college. June 13, 1922.

Part-time, evening and Americanization courses. A history, outline, digest of above, courses of study, etc.

GENERAL

Boardman, Harry L. Separation of junior college from high school. Master's thesis, University of California. May, 1925.

SECONDARY EDUCATION RESEARCH

Davis, Calvin Olin. The high school as judged by its pupils. In North central association. Proceedings, Part I, 1924, p. 71-144.

This study is based on data gathered by a questionnaire submitted to the pupils of a selected group of North central schools.

Falls, J. D. City public high schools in Kentucky. Master's thesis, George Peabody college for teachers. 1923.

The data for this study were supplied by the Kentucky state department of education. The purpose of this study is to determine the typical high school as shown by administrative practices.

Ferriss, Emery N. The rural high school: its organization and curriculum. Washington, D. C., Government printing office, 1925. (U. S. Bureau of education. Bulletin, 1925, no. 10.)

Analysis, largely, on basis of statistical material of the internal organization, community relationship, extra-classroom activities, and curriculums of the rural high schools. Fifty-four rural high schools in 18 states visited; replies to questionnaires from 231 principals representing 47 states; and data from recent state department reports and Bureau of education bulletins. Comparisons made with other semi-rural high schools. Data includes number and length of recitation periods; number of classes; pupil guidance; transportation; teaching load; principal's load; quality of teaching; subjects offered; state regulations.

Findley, Oscar. The development of the high school in Indiana. Doctor's thesis, Indiana University. 1924.

Gregory, W. G. A comparative study of the White county high schools and graded high schools of Kentucky. Master's thesis, George Peabody college for teachers. 1924.

This is a constructive criticism of the administrative anomaly of two incompatible school systems in Kentucky. A program consistent with progressive ideals and the needs of Kentucky is suggested.

Roemer, Joseph. Report of the committee on deans' reports. Association of colleges and secondary schools of the Southern States. Proceedings, Part IV. March, 1925. Georgia, Banner press, Emory university [1925] 120 p.

This report involves data on enrollment, graduates, college entrants, and failures of 12,110 pupils in 690 Southern association high schools.

Simmons, I. F. The public junior college. Master's thesis, George Peabody college for teachers. 1924.

The purpose of this study is to determine the origin, development, and function of the public junior college and to indicate the present tendencies in the reorganization of secondary and higher education.

Terry, Paul W. Recommendations concerning reports on high schools by state departments of education. Educational administration and supervision, 8: 468-78, November, 1922.

Analyzes data on high schools from the Washington state department of education to show a method of studying educational problems from available statistical data.

Woody, Clifford. The holding power of the small high school. Michigan education journal, 1: 72-79, 1923.

JUNIOR HIGH

Barber, Zay. Objectives as determining factors for constructing a course of study in junior high-school science. Master's thesis, University of California. June, 1925.

SCHOOLS

Bird, Verne A., and Pechstein, Louis A. General intelligence, machine-shop work, and educational guidance in the junior high school. *School review*, 29: 782-86, December, 1921.

A study which shows that with fairly simple mechanical work, boys of low-grade intelligence turn out a better grade of work than the brighter boys.

Brehm, J. J. Variation in the treatment of different groups. Ninth annual Schoolmen's week. Proceedings, April 20-22, 1922. Pennsylvania university. Bulletin, vol. 23, no. 1. p. 248-52.

Harrisburg high school pupils (junior) grouped according to previous records.

Briggs, Thomas H. A composite definition of the junior high school. Educational administration and supervision, 6: 181-86, April, 1920.

A study by a committee of graduate students presenting a composite definition of the junior high school from a survey of available literature.

Chase, Lillian G. The history of a class entering junior high school, August, 1918, for the ensuing six years. Master's thesis, University of California. May, 1925.

Chassell, Clara F., and Chassell, Ella B. A test and teaching device in citizenship for use with junior high-school pupils. Educational administration and supervision, 10: 7-23, January, 1924.

A test of ability to weigh foreseen consequences devised. Directions for administration, method of scoring, distribution of scores for Horace Mann school, analysis of results, and discussion.

Clement, John A. Current practice in the organization and administration of junior high schools. *School review*, 30: 110-17, February, 1922.

Studies the form of organization and administrative practices in 40 Kansas and 32 Indiana non-eight-four high schools. Finds great diversity of organization.

— and **Clement, J. H.** Summary of organization and administration of 40 junior high-school systems of Kansas. Educational administration and supervision, 8: 137-42, March, 1922.

Gives results of a questionnaire study of junior high schools of Kansas. Data on school population; enrollment; date and plan of organization; method of promotion; credit recording and classification of pupils; teaching periods per day; length of recitation, and plan of supervised study; experience, training and salary of teachers; housing and control are introduced.

Columbia university. Teachers college. Committee report of students: Junior high-school curricula. Educational administration and supervision, 10: 575-604, December, 1924.

The report analyzes current literature and outlines junior high-school curricula for small and large high schools. Discusses the organizing principles and objectives of the curricula; proposed curricula for a small and for a large 3-year school. Explanations regarding the curricula for guidance of pupils, parents and pupil advisors are also included.

Cromwell, P. R. Junior high-school curricula. Master's thesis, Indiana university. 1924.

Deffenbaugh, W. S. Specimen junior high-school programs of study. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 21.)

Contains 25 specimen junior high-school programs selected from those on file in the Bureau of education and tables of data compiled from the programs. Also a bibliography of junior high-school references.

SECONDARY EDUCATION RESEARCH

Dvorak, August. Recognition of individual differences in the junior high school. *School review*, 30: 79-85, November, 1922.

A study based on 88 schools—use of achievement tests; adaptation of work to individual differences.

Edmonson, J. B. Report on junior high schools. In Twenty-seventh annual meeting of the North central association of colleges and secondary schools. *Proceedings*, Part I, 1922, p. 56-62.

Erwine, Florence Belle. A survey of the junior high-school curricula in Berkeley, Calif., 1911-1923. Master's thesis, University of California. May, 1923.

Farwell, Nina Melissa. An evaluation of Latin in a junior high school. Master's thesis, University of California. May, 1925.

Ferguson, Arthur W. Articulating the junior and senior high schools. *School review*, 31: 540-6, September, 1923.

Reports on results of a questionnaire study which secured data from 37 junior high-school principals and 36 senior high-school principals in 18 states concerning articulation of junior and senior schools. Concludes that entirely satisfactory articulation has not yet been made.

Franklin, Edward Earle. The permanence of the vocational interests of junior high-school pupils. Johns Hopkins university. *Studies in education*, no. 8, 1924.

This study was undertaken for the purpose of solving the problem created in vocational guidance by the changeable nature of vocational interests of high-school pupils. Data are presented for 78 entering pupils in 8 junior high schools of Baltimore involving intelligence; permanency of vocational choice; permanency of favorite studies; entertainments and activities; elimination from school; relation of vocational interest to course of study elected; and variation of permanency of choice among the several vocational groups.

Gard, Glennie Neal. The correlation between the intellectual status of the pupils and the occupational status of the fathers of a group of junior high-school pupils. Master's thesis, University of California. May, 1925.

Glass, James M. Curriculum practices in the junior high school and grades 5 and 6. University of Chicago. Supplementary educational monograph, no. 25, November, 1924.

An exhaustive analysis of present curriculum practices involving practice in time allotment to various subjects; practice as to constant and elective subjects; allocation of subject electives to grades; subject divisions of the constants and units of teaching, with time allotment to individual units of teaching.

— Present status of the junior high school in cities of more than 100,000 population. *School review*, 32: 598-602, October, 1924.

Reports on a questionnaire study of the status of the junior high school in 61 cities of over 100,000 population. Finds junior high schools in 75 per cent of cities in operation under construction or authorized. Presents tabulation showing by cities number of junior high schools in operation, under construction and authorized, number of junior senior schools, number of junior high schools connected with elementary schools, and number of schools of other types.

— Recent developments in the junior high-school field. Ninth yearbook of the National society of secondary school principals.

Surveys, largely for 1923-25, tendencies in organization by years and in curriculum construction in junior high schools.

Hall-Quest, Alfred L. The training of junior high-school teachers. Educational administration and supervision, vol. 9. May, 1923.

A committee report dealing with the relationship between the objectives of the junior high school and principles that should control programs of teacher training. Requirements of state departments of education in certifying junior high-school teachers and the organization of training programs.

Hamill, Joseph E. The junior high school, its feasibility in the Catholic educational system. Dissertation. Catholic university of America. 1922.

A survey of the origin, growth, purposes, and results of the junior high school from the point of view of the desirability of adoption into the Catholic educational system.

Hampel, Cora Elizabeth. The predictive value of junior high-school subjects for first year work in the senior high school. Master's thesis, University of California. May, 1925.

Hill, Sallie Winona. The value of junior high-school scholastic records as a basis for predicting senior high-school success. Master's thesis, University of California. July, 1925.

Hines, Harlan Cameron. Junior high-school curricula. New York, Macmillan co., 1924.

This book organizes current practices and opinion into a suggested procedure in initiating junior high-school courses of study.

Koos, Leonard V. The junior high school and college entrance. School review, 32: 494-507, September, 1924.

Presents a survey of expert opinion ranking 21 functions of secondary education, analyzes these functions, and allots appropriate functions to junior and senior high schools.

— The peculiar functions of the junior high school. School review, 28: 673-81, November, 1920.

Gives a ranking in order of importance of peculiar functions of the junior high school as determined by opinion of students in education courses and as determined by a canvas of educational literature.

Lockman, Cloudsley Morington. The visiting teacher in the junior high school. Master's thesis, University of California. July, 1925.

Lull, H. G. New materials for the junior high school. Twentieth yearbook of the National society for the scientific study of education, 1921. Part I, Chapter 4.

A collection of 91 projects from various sources suitable for junior high-school pupils.

McMillan, Elizabeth Davidson. A course of study plan in literature and reading for the Oakland elementary grades, and the junior high schools; and a literature and composition course for the senior high schools. Master's thesis, University of California. September, 1923.

Manuel, Herschel T. Is the junior high school doing what its advocates claim for it? Educational administration and supervision, 7: 408-15, October, 1921.

Reports on a questionnaire study which secured returns from 24 of 31 superintendents concerning their attitude toward the junior high school.

Munson, Walter Bodle. Pupil participation in management of intermediate schools. Master's thesis, University of California. 1920.

Pratt, Orville Clyde. Status of the junior high school in larger cities. School review, 30: 663-70. November, 1922.

Reports on a survey of all cities of over 100,000 population; offers data from 60 cities. Gives cities having junior high schools, form of organization, when established, attitude of superintendent towards junior high school, and holding power of junior high school. Finds a generally favorable attitude toward the junior high school.

Preston, James T. Junior high school of Berkeley, Calif. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 4.)

A committee report prepared by James T. Preston, chairman, W. B. Clark, H. H. Glessner, and D. L. Hennessey, in cooperation with H. B. Wilson, superintendent of schools. The school situation is discussed in relation to physical environment, population, and industry. A description is given of the school system as a whole, comparing school with city population, and increase of both for period of years. Presents graph illustrating grade distribution of schools for number of years; gives development, objectives, teachers, and curricula of junior high schools, with detailed accounts of each.

Roberts, William E. Manual arts in the junior high school. Washington, D. C., Government printing office, 1924. (U. S. Bureau of education. Bulletin, 1924, no. 11.)

Based upon a survey of junior high schools in a number of typical cities and towns and several consolidated or township schools in rural communities. Detailed descriptions of courses are given. General conclusions are drawn, objectives stated, and suggestions made concerning development of methods, courses, equipment needed, etc. Plans of several manual arts rooms with list of equipment for each reproduced. Bibliography.

Rochester junior high-school council. The junior high schools of Rochester, N. Y., 1923.

A comprehensive survey of Rochester junior high schools. Chapter headings are: Origin and growth of the junior high-school plan; organization, administration and supervision; curriculums and courses of study; results; and costs.

Rodgers, J. Harvey. Junior high-school curricula and programs. School review, 29: 198-205, March, 1921.

Reports on a survey of 101 junior high schools in 36 states relative to curriculum organization. Concludes that 3-year junior high schools are much superior to 2-year schools in curriculum organization.

Saupe, Walter J. Classification of pupils in a junior high school. University of Missouri. Bulletin, vol. 26, October 20, 1925.

A report on the results of standard mental and educational tests given to pupils in the Jefferson City (Mo.) junior high school. Attempts to show how a classification of pupils may be evaluated by a series of mental and educational tests, and how results of the same tests may be used also in improving instruction.

Schorling, R. A tentative list of objectives in the teaching of junior high school mathematics, with investigations for the determining of their validity. Ann Arbor, Mich., Published by George Wahr.

Smith, Homer J. Special preparation for junior high-school service. Educational administration and supervision, 8: 513-18, December, 1922.

Analyzes data supplied by 380 teacher training institutions concerning practices in special training for junior high-school teachers.

Smith, W. A. Junior high school practices in 64 cities. Educational administration and supervision, 6: 139-40, March, 1920.

Reports on a questionnaire study of practices in junior high-school organization and administration.

Smyrl, Elizabeth Ann. The junior high-school library. Master's thesis, University of California. May, 1924.

Spiess, Gustavis Adolphus. Tendencies in departmentalization of instruction in elementary and junior high schools. Master's thesis, University of California. May, 1925.

Stoker, Edith M. A study of requirements for junior high-school teachers in each state and in certain representative cities. Master's thesis, Ohio state university. 1922.

Gives facts of requirements for junior high-school teachers for all states except Illinois, South Carolina, and South Dakota, and for 20 cities.

Strayer, Samuel Bechtel. The status of teachers in junior high schools. School review, vol. 29, May, 1921.

Reports on a questionnaire study of 99 junior high schools in 36 states. Concludes that there is a decided tendency toward the 3-grade junior high school; that 62 per cent of junior high schools are under a separate principal; that the proportion of men teachers is small; that the majority of teachers have been drawn from the elementary school; that four fifths of the teachers are normal or college graduates and a majority are specialists. Reports also on median salaries.

Terry, Paul W. Providing adequate housing accommodations for the junior high school. School review, 32: 13-26, January, 1924.

Presents data from 149 junior high schools with enrollments from 200 to 1,750 pupils showing organization, kinds of building space and floor space provided in more than 50 of the larger buildings originally planned for junior high-school purposes.

— and **Marquis, William J.** Legislation on the junior high school. Washington, D. C., Government printing office, 1924. (U. S. Bureau of education. Bulletin, 1924, no. 20.)

Types of high-school legislation; analysis of legislation; the junior high schools in states having no direct legislation; effect of legislative stimulation. Appendix gives legislation, by states, relating to junior high schools.

Trabul, M. R. The use of intelligence tests in junior high schools. Twenty-first yearbook of the National society for the study of education, 1922. p. 160-188.

Tests have been used successfully in the educational guidance of pupils of junior high school age and in the classification of such pupils into groups of homogeneous intellectual ability.

Warren, Raymond Maplesden. A program for correlation between boy scout activities and the junior high school. Master's thesis, University of California. May, 1925.

Washburne, Carleton Wolsey. Course in general science for the intermediate school. Master's thesis, University of California. 1922.

Welser, A. B., and Ashbaugh, E. J. What books do junior and senior high-school students read? Educational research bulletin, vol. 3, 1924.

Analyzes data secured from 2,599 high-school pupils showing by sex, median number of books read by pupils, number of different books read distributed by grade and sex, grade and sex distribution of the number of different books read 25 or more times and 50 or more times, distribution of the 25 highest frequency books which pupils are usually required to read.

Willmot, John N. A course of study in the industrial arts for the junior high schools of Alabama. Master's thesis, George Peabody college for teachers. 1924.

The purpose of this thesis is to plan a course of study in the industrial arts for the junior high schools of Alabama. The study undertakes to base the course of study on sound principles and best practices.

Winslow, Leon Loyal. The significance of art as a junior high-school subject. *Educational Administration and supervision*, 10: 495-503, November, 1924.
Analyses of junior high-school programs in art education in 14 cities.

Wise, Carl Tipton. A mental and educational survey of junior high-school pupils. Master's thesis, University of Wisconsin. 1922.

Wohlquist, J. T. The development of junior high schools in Utah. Master's thesis, University of Utah.

Wood, Ben D., and Bell, J. Carleton. Solution of problems in geometry. *Journal of educational psychology*, 11: 316-326, September, 1920.

Based on the schools of Los Angeles, this study concerns itself with two major problems: (a) To what extent do junior high school pupils persist in school? (b) To what extent are secondary education electives economically offered in the intermediate schools?

Ziegler, Samuel Horning. The social studies in the junior high school. Thesis, University of Pennsylvania. 1923.

The chapter headings are: Aims of the course; content of the course; method in the junior high school; measuring the results of teaching history.

Zimmerman, Bruce Lewis. Data necessary for effective classification of pupils entering junior high school. Master's thesis, University of California, May, 1925.

SPECIAL

Deffenbaugh, Walter S. Schools in the bituminous coal regions of the Appalachian Mountains. Washington, D. C., Government printing office, 1920. (U. S. Bureau of education. Bulletin, 1920, no. 21.)

Schools in many mining towns studied. Data collected on nationality, enrollment and attendance, age-grade, teachers, course of study, and out of school occupations.

Sargent, Ruth F. What can the blind do? Publications of the Pennsylvania institution for the instruction of the blind, no. 3, June, 1924.

Studies 500 former pupils of the Pennsylvania institution for the instruction of the blind giving data on degree of vision and age of incidence by sex, mentality, educational history, training versus present occupation, economic status, recreation habits, occupation, nativity, parentage and color.

Works, George A. Agricultural education. Washington, D. C., Government printing office, 1923. (U. S. Bureau of education. Bulletin, 1923, no. 19.)

Definite data as to schools, teaching, average number of teachers and pupils, years of establishment, types of schools and classes, methods, training of teachers, and supervision.

SUMMER

Bush, Ralph H. Current practices in summer school. *School review*, 32: 142-46, February, 1924.

Outlines practices in summer school as shown by returns from 273 schools. Shows a lack of standards for the summer term of high schools.

Hoffman, M. David. Status of summer high schools in cities of more than 100,000 population. *School review*, 33: 107-14, February, 1925.

Summarizes data from 66 cities of over 100,000 population concerning the summer term in high schools. Reports 44 cities as having a summer term; that the summer term is commonly an integral part of the school year; that 12.5 to 33.3 per cent of the student body is normally enrolled in the summer term; and points out specific advantages of the summer term over regular high school year.

McCaull, Mary Edna. The influence of high-school education upon social leadership. Master's thesis, University of Wisconsin. 1924.

SOCIETIES AND FRATERNITIES

Newlon, Jesse H. High-school fraternities. Educational administration and supervision, 7: 872-79, October, 1921.

Introduces data from Lincoln, Nebr., high school showing superior scholastic and attendance records of nonfraternity boys.

Rynearson, Edward. Honor societies in secondary schools. School review, 30: 456-66, June, 1922.

Traces the origin and growth of honor societies in secondary schools of the United States. Reproduces the constitution of the National honor society of secondary schools.

STATISTICS

Davis, Calvin Olin. The quinquennial report of the North central association of colleges and secondary schools. Proceedings, 1925.

This report gives and interprets statistics of North central association high schools under the headings: Organization of schools; pupils; supervisory officers; teachers; program of studies; buildings; and administrative policies.

Simpson, Alfred D. Financial statistics relating to schools, Connecticut towns and cities, 1922-23. Connecticut state board of education. Research bulletin 1, series, 1923-24.

Analyzes financial school statistics of Connecticut including high-school statistics by towns. Gives total and percentage of support from specified sources, conditions governing disbursements for specific items, analyzes budgets by towns, tax rates by towns and percentage of total tax rate going for school and per pupil costs of schools.

United States. Bureau of education. Statistical survey of education, 1917-18. Washington, D. C., Government printing office, 1920. (Bulletin, 1920, no. 31.)

Contains statistical data for the United States as a whole, separated according to types of schools (kindergarten, elementary, high, etc.), such as enrollment, cost, distribution of teachers, attendance, length of school term, expenditures, per capita cost.

Statistical survey of education, 1919-20. Washington, D. C., Government printing office, 1923. (Bulletin, 1923, no. 16.)

A general summary of statistics collected in the bureau and published in separate bulletins for the two years. It shows the enrollment in public and private secondary schools and institutions of various types, the estimated expenditures for these schools, the distribution of teachers, and certain combined statistics of public and private high schools reported separately. It includes, also, tables showing enrollment by states, distributed in public and private elementary, secondary, and higher institutions.

Statistical survey of education, 1921-22. Washington, D. C., Government printing office, 1924. (Bulletin, 1924, no. 38.)

A general summary of statistics of enrollments in the various types of schools, public and private; distribution of teachers; cost of operating; and comparison of opportunities in various states.

Statistics of city school systems, 1917-1918. Washington, D. C., Government printing office, 1920. (Bulletin, 1920, no. 24.)

Comparative summary of general city school statistics for cities of 2,500 population and over, 1917-18, divided into five population groups. Statistics cover distribution of attendance and personnel, expenses of instruction, enrollment, junior high schools, age-grade data, ratios between boys and girls in high-school grades, acceleration and retardation, number of schools, length of term, evening schools, etc.

United States. Bureau of education. Statistics of city school systems, 1919-20. Washington, D. C., Government printing office, 1922. (Bulletin, 1922, no. 17.)

Distribution of attendance, personnel, expenses of instruction by types of schools classified according to size of city; number of schools and buildings; number and salaries of teachers; length of term; data of junior high schools; provision for health and recreation; expenses of instruction, operation, etc.; type of school.

——— **Statistics of city school systems, 1921-22.** Washington, D. C., Government printing office, 1922. (Bulletin, 1924, no. 34.)

Statistics classified by groups of cities—population groups of 100,000 or more, more than 30,000 but less than 100,000; those having 10,000 or more but less than 30,000 population, and those with less than 10,000 population. Distribution of attendance and personnel in day schools; administrative officers employed; enrollment; teachers; expenditures; number and type of building; number and type of schools.

——— **Statistics of private high schools and academies, 1917-18.** Washington, D. C., Government printing office, 1920. (Bulletin, 1920, no. 3.)

A review of statistics 1900-1918, and for 1917-1918. Number of schools, size, control; number of students and instructors in each; enrollment classified by years, sex, color, course of study; number of graduates; graduates entering higher institutions; property; income; benefactions; and length of school term.

——— **Statistics of private high schools and academies, 1919-20.** Washington, D. C., Government printing office, 1922. (Bulletin, 1922, no. 9.)

Statistics of 2,093 private high schools and academies in the continental United States and of four such schools in Hawaii and Porto Rico. Data giving number of schools reporting; number of instructors; number of students by five-year periods; schools classified according to religious control; length of course, military drill offered; size of library; value of plant; endowment; number of graduates; continuation of work after graduation; race.

——— **Statistics of private high schools and academies, 1921-1922.** Washington, D. C., Government printing office, 1923. (Bulletin, 1923, no. 60.)

Reviews general statistics for period 1890-1922. Gives data from 1,963 private schools reporting to the bureau concerning instructors; students; control; value of property; military drill; graduates (number entering higher institutions, classification by years, sex, race, subjects studied, etc.); and a general summary of all data.

——— **Statistics of public schools, 1917-18.** Washington, D. C., Government printing office, 1920. (Bulletin, 1920, no. 19.)

Comparative statistics by years from 1890-1918 and statistics for 1917-18. Data classified by states, size and type of school and summaries for the United States as a whole. Data as to enrollment; sex; grade; color; graduates (number entering higher institutions, courses followed); instructors (number, sex, salaries, number pupils taught); schools (cost, equipment and buildings, courses offered, length of term), etc.

——— **Statistics of public high schools, 1919-20.** Washington, D. C., Government printing office, 1922. (Bulletin, 1922, no. 37.)

Statistics of all public junior and senior high schools. Studies of enrollment, pupils per teacher, number of teachers, and graduates are made, separated according to grades, types of schools, race, etc. No interpretation of data is attempted.

United States. Bureau of Education. Statistics of public high schools, 1921-22. Washington, D. C., Government printing office, 1922. (Bulletin, 1924, no. 7.)

Reports from 14,056 schools. Data of enrollment; distribution of pupils by color and sex; teachers; survivals; graduates; continuation of education; units of control; military drill; requirements for graduation; studies pursued; courses offered.

Statistics of state school systems, 1917-18. Washington, D. C., Government printing office, 1920. (Bulletin, 1920, no. 11.)

Attendance; enrollment; length of term; part of term wasted; enrollment by sex, grade, and year; school survival; teachers (number, sex, salaries); type and number of schools; value of school property; receipts; expenses.

Statistics of state school systems, 1919-20. Washington, D. C., Government printing office, 1922. (Bulletin, 1922, no. 29.)

Summary by years, 1870-1920; distribution by grades; enrollments; attendance; length of term; officers and teachers; schools and buildings; value of property; support; expenditures; white and colored pupils.

Statistics of state school systems, 1921-22. Washington, D. C., Government printing office, 1924. (Bulletin, 1924, no. 31.)

Comparison of general school statistics, data as to distribution by grades; enrollment; attendance; length of term, for years 1870-1922; 1921-22 data as to officers; teachers; schools and buildings; value of property; expenditures; support; attendance; enrollment of white and colored pupils.

SUPERVISION

Sealy, R. M. The report of the state high-school supervisor. Master's thesis, George Peabody college for teachers. 1925.

This is a study of the practices of the various state departments of public instruction for the purpose of preparing and publishing a periodical report on secondary education in Florida for the biennium beginning July 1, 1923, and ending June 30, 1924.

SURVEYS

Adams, J. F. Modoc County mental survey. University of California. Bureau of educational research. Study no. 4.

Allen, Frank E. Survey of central high school of Muncie. Master's thesis, Indiana university. 1924.

Collins, Earl A. Survey of the township and community high schools of Illinois. Master's thesis, George Peabody college for teachers. 1923.

The purpose of this study is to determine the typical school of the community and township of Illinois with regard to buildings, equipment, grounds, organization and classification, curriculum, teaching staff, student organizations, and finances.

Davis, Jesse B. A survey of the organization and administration of high schools in the state of Connecticut. Hartford, Conn., State board of education. (High school bulletin.)

Studies Connecticut high schools, presenting data on size of classes; use of principals' time; sex of teachers; pupils per teacher; pupil enrollment by years, sex, and size of school; rate of increase in enrollments; ratio of pupils to 1,000 population; tuition of pupils; distribution of graduates in higher institutions and in industry; program of studies; pupil failures; extra-curricula activities; libraries; buildings and grounds; equipment; costs, etc.

Davis, Jesse B. A survey of the schools of West Hartford, Conn. Connecticut state board of education, 1922-23.

Chapter 5 of this study is devoted to the secondary schools. Data on growth of the schools, enrollment of pupils, organization and administration, the faculty, scholarship of pupils, intelligence of pupils, age of pupils, graduates and the program of studies are introduced. A suggestive program of studies is outlined and organized into curricula.

Engelhardt, N. L., and others. Report of the survey of the public school system of the town of Stamford, Conn. (school year 1922-23). Teachers college, Columbia university.

Chapters of the report of interest in secondary education are: The teaching staff; secondary education; English in the high school; the teaching of mathematics; industrial arts; fine arts; vocational education and household arts education; Americanization classes for the foreign born; the present school plant; the city of Stamford and its school building problem; the school building program; school financing and school costs in Stamford.

Ferriss, Emery N. The rural high school. Rural school survey of New York state, vol. 7. 1922.

A comprehensive survey of rural high schools of New York state including chapters on the distribution of rural high schools and their pupil population; the organization of rural high schools; administration and supervision; the teaching staff; classroom instruction and the curriculum.

Fulp, Joseph B. A study of the Alachua public schools, Alachua, Fla. University of Florida record, vol. 20, June, 1925.

A comprehensive survey of the Alachua, Fla., public schools.

Hart, Frank W. A school building survey and school-housing program for Eureka, Calif. January, 1924.

The survey introduces data showing growth of population for Eureka and six California cities; racial composition of population; age and sex composition of the population; trends in school enrollments; school building measurements; school costs for Eureka, Humboldt County and for California; costs of instruction for 21 Californian cities; distribution of costs per pupil in average daily attendance for California 1921-22; school expenditures distributed by function for 21 California cities 1922-23; assessed and real wealth statistics for California counties and statistics of investments; tax rates and debt for 21 California cities.

— A school building survey and school-housing program for Napa, Calif. University of California. Bureau of educational research. Study no. 2. 1921.

— **and Peterson, L. H.** School-building survey and school-housing program for San Rafael, Calif. University of California. Bureau of research in education. Study no. 8, 1922.

Inglis, Alexander. Report of survey staff to board of education, Augusta, Me.

Survey chapters are: Augusta and its educational needs; school enrollment, attendance, and progress through the grades; the elementary schools; secondary education; proposed reorganization of the school system; the teaching force; the rural schools; school hygiene and health education; buildings and the building program; administration; finance.

Koch, Harlan C. The efficiency of the Mt. Vernon, Ohio, high school as an educational institution. Master's thesis. Ohio state university. 1923.

Gives data on curricula; pupil failure by subjects; teacher and pupil opinion as to the reason for failure; mental ability of pupils and home conditions.

Pennsylvania. Department of public instruction. High-school inquiry committee. (S. N. North, chairman.) Survey of the high schools of Pennsylvania. Harrisburg, Pa., Department of public instruction.

Gives data on distribution of high schools by counties and classes of schools; distribution of the various classes of high schools in the various classes of districts; changes in the number of high schools of the several classes; changes in high-school enrollment, 1913-1923; number of pupils enrolled in each class of high school in the various classes of districts; variation of the ages of pupils in different classes of high schools; enrollment in high schools of various classes in third and fourth class districts; enrollment in third class high schools with various numbers of teachers; distribution of the various classes of high schools by length of school term; types of certificate held by teachers in various classes of high schools; experience, preparation and salaries of teachers in various classes of high schools in third and fourth class districts; experience, certificates held, and salaries of principals in third and fourth class districts. Introduces a suggested program of studies.

Roemer, Joseph. A study of Florida high schools. Second annual conference of Florida high-school principals, April 7 and 8, 1921. Proceedings. University of Florida record, vol. 17, February, 1922.

A study of Florida high schools involving organization of schools, training, tenure and supply of teachers, and the course of study.

Sayers, E. V. An analysis of the high-school surveys. Master's thesis, Indiana university. 1920.

Sears, Jesse B. Survey of Marysville union high school, Calif. Marysville, Calif., Board of education, Marysville union high school, 1925.

A report of an investigation of the physical needs of the school and of a plan for financing the proposed program of development. Chapter headings are: The community's educational needs; the community's financial ability to support schools; the kind of school facilities the school now has; the program recommended. Extensive comparative data on population, growth, enrollment, wealth, tax rates, and high school costs for Marysville and other California high schools are introduced.

Siehl, B. H. A survey of a night high school. School review, 31: 533-39, September, 1923.

Reports on a survey of West night high school, Cincinnati, Ohio. Gives data on age and number of students, reasons for attending night school, years attending night school, and occupations pupils expect to enter.

Strayer, George D., and Engelhardt, N. L. Report of the survey of the public school system of Hackensack, N. J.

A comprehensive survey dealing with: Administration; school buildings; measurement of classroom achievements; classification and progress of pupils; the teaching staff; instruction and the course of study; and the costs of education.

— Report of the survey of the public school buildings and a proposed school building program for St. Joseph, Mo., 1922-23.

Chapter headings are: 1. City of St. Joseph and its school problem. 2. Present school plant. 3. Site and building program. 4. How each of the present school buildings is affected by the proposed building program. 5. School financing and school costs in St. Joseph.

Studebaker, J. W. School building survey and proposed building policy and program, Des Moines, Iowa. Des Moines, Iowa, Board of education, December, 1922.

Shows poor economy of operating existing system; examines population data and predicts growth of school enrollment; shows relation of senior high-school enrollment to elementary enrollment, analyzes school-building needs, and estimates costs of proposed program.

Theisen, W. W. Survey of the department of instruction, Cleveland public schools, 1922.

This survey gives data on nationality of children, tendencies in school enrollment, high-school graduates, grade distribution of enrollment, comparative increase in enrollment and number of teachers employed, comparative increases in enrollment and classroom accommodations, nonpromotions, failures in junior and senior high schools, progress achievement in various school subjects, mentality of pupils, and school costs.

Vance, Carl T. A study of the high schools in Hawkins County. Master's thesis, George Peabody college for teachers, 1922.

A survey considering the following factors: Buildings, finance, curriculum, age, grade and attendance, teaching staff, and some phases of administration.

SURVEYS MADE BY U. S. BUREAU OF EDUCATION

Ed National survey of Elizabeth City, N. C. Washington, D. C., Government printing office, 1921. 43 p. (Bulletin, 1921, no. 26.)

Study of the entire school system, through all the grades. School census; enrollment and attendance compared; enrollment by classrooms; special facilities and teaching force by type of school, and color are given for 1914-15 and 1919-20; enrollment by grades and races for 1914-15 and 1919-20; cost of maintaining schools and rank compared with other cities; grade distribution; holding power of schools; age-grade data; recommendations for improvement.

The public school system of Arkansas. Part 1. Digest of general report Washington, D. C., Government printing office, 1923. 79 p. (Bulletin, 1923, no. 10.)

Digest of the general report of a survey made under the direction of the U. S. Commissioner of education at the request of the Arkansas state educational committee. It is a comprehensive survey of the entire state school system, urban and rural, elementary and secondary. Data for high schools show increase in enrollment for an 18-year period, per cent of total school enrollment in high school, number of schools, and school facilities. District agricultural schools discussed.

The public school system of Arkansas. Part 2. Public school finance. By Fletcher Harper Swift. Washington, D. C., Government printing office, 1923. 110 p. (Bulletin, 1923, no. 11.)

An exhaustive study of financial conditions in Arkansas in relation to the schools, such as valuation, tax rate, per capita cost, rank of state, receipts and sources of school revenue, education inequalities, etc.

A school building program for Gloucester, Mass. Washington, D. C., Government printing office, 1920. 16 p. (Bulletin, 1920, no. 23.)

A study of conditions in the schools of Gloucester, Mass., giving data as to school population, enrollment, attendance, instructors, classroom and special facilities, and recommendations for an adequate building program.

A school building program for Meriden, Conn. By Alice Barrows Fernandez. Washington, D. C., Government printing office, 1920. 26 p. (Bulletin, 1920, no. 22.)

Survey made as to nativity of school population, its growth from 1905-1919, enrollment, attendance, instructors, and school facilities. Recommendations made for an adequate building program.

Suggestions for consolidating the rural schools of Beaufort County, N. C. By Katherine M. Cook and E. E. Windes. Washington, D. C., Government printing office, 1923. 23 p. (Bulletin, 1923, no. 48.)

General conditions studied. Data on school enrollment and attendance; age-grade; teachers, their salaries and preparation; high-school facilities; buildings and equipment.

Suggestions for the reorganization of the schools in Currituck County, N. C.
By Katherine M. Cook. Washington, D. C. Government printing office, 1921. 31 p. (Bulletin, 1921, no. 24.)

-A detailed survey of school conditions of Currituck County, N. C., for the purpose of establishing a county system of schools affording the best elementary and high school education possible to the children of the county.

A survey of education in Hawaii. Washington, D. C., Government printing office, 1920. 408 p. (Bulletin, 1920, no. 16.)

Analysis of educational problem as to race, occupations, political situation, adequacy of school system. Includes data as to school support, types of schools, administration, buildings and equipment, teaching force, enrollment, attendance, promotions and failures, curriculums, size of classes, etc.

Survey of the schools of Alexandria, Va. Washington, D. C., Government printing office, 1923. (Bulletin, 1923, no. 56.)

Study of enrollment, attendance, progress through the grades, course of study, teaching staff, school plant, per capita cost, physical status of pupils, etc.

Survey of the schools of Brunswick and of Glynn County, Ga. Washington, D. C., Government printing office, 1920. 82 p. (Bulletin, 1920, no. 27.)

Survey of rural and city elementary and high schools. Includes data on census, attendance, enrollment, holding power of school, age-grade distribution, teachers (teaching load, quality of teaching, salaries, quality of instruction offered), expenditures, tax rate, buildings and equipment.

Survey of the schools of Wilmington, Del. Part 2. Washington, D. C., Government printing office, 1921. 191 p. (Bulletin, 1921, no. 2.)

Contains chapter on secondary education. Status of secondary education; two high schools, one white, one colored; percentage school population in high school; holding power; retardation and failures; curriculums; teachers; administration and supervision; buildings and equipment.

Survey of the schools of Winchester, Mass. Washington, D. C., Government printing office, 1920. 193 p. (Bulletin, 1920, no. 43.)

Survey of school organization and administration, school population, instructors, enrollment, attendance, costs and expenditures, school facilities, etc.

SURVEYS MADE BY WISCONSIN DEPT. OF PUBLIC INSTRUCTION

A school building survey of Antigo, Wis.

Scores school buildings; recommends reorganization on 6-3-3 plan; studies vocational opportunities; school enrollments with reference to the senior high-school building and the junior high-school building; introduces data on school finance and costs; and discusses the present and proposed high-school organization.

A school building survey of Appleton, Wis.

Gives scores of present school buildings; elementary enrollment and cost data, 1912-22; building capacities; suggests adaptations needed in present high-school building; outlines a junior high-school plan; and introduces extensive data on school costs and finance.

A school building program for Eau Claire, Wis., 1923.

Gives, for Eau Claire, scores for buildings; enrollment and population statistics; probable growth of enrollments; statistics of wealth, debt and taxation; and data as to the teaching staff of Eau Claire and selected Wisconsin cities.

TEACHERS

Baum, Paul Burdette. Certification of high-school teachers in the special subjects. Master's thesis, University of Wisconsin. 1921.

Bonner, Harrie Russell. Salary outlook for high-school teachers. *School review*, 30: 414-23, June, 1922.

Shows from statistical data of U. S. Bureau of education the percentage increases in salary that may be expected in the various states based on initial and average salaries.

Brooks, Samuel S. Getting teachers to feel the need for standardized tests. *Journal of educational research*, 2: 425-35, June, 1920.

Report of a series of four teachers' meetings in New Hampshire, with special reference to arithmetic and history and evaluation of scores, etc.

Buckingham, B. R. The demand for trained teachers in Ohio. *Educational research bulletin*, vol. 4, May 27, 1925.

Offers data showing the number of new teachers needed yearly in Ohio and the assignments of new teachers to specified duties.

Bushnell, Paul P. A method of teacher comparison. *Educational administration and supervision*, vol. 9, October, 1923.

Outlines a method of comparing the efficiency of teachers through tracing the marks of the pupils of each in later courses. Analysis of the data of a particular case from a girls' private school is the basis of the study.

Carpenter, John E. Nelson. Industrial teachers; standard for selection of candidates for training. Master's thesis. University of California, 1921.

Cook, Katherine M. State laws and regulations governing teachers' certificates. Washington, D. C., Government printing office, 1921. (U. S. Bureau of education. Bulletin, 1921, no. 22.)

Analysis of laws regulating all teachers' certificates state by state.

Cowing, Helen H. A teacher's time. *School review*, 31: 362, May, 1923.

Reports on results of a questionnaire study which secured data from 108 teachers in 14 cities relative to the use of the teacher's time.

— Relative expenditure of a secondary teacher's time and energy. Master's essay, Yale University, 1921.

Detailed report of study described in *School review*.

Davis, Calvin Olin. North central association of teachers. *Proceedings*, 1922. Part I, p. 24-54.

Presents facts relative to the training, experience, salaries, and opinion on professional training of 25,000 high-school teachers in North central schools.

Dawson, Charles D. Report of 59 city superintendents concerning a salary schedule for teachers. *Detroit bureau of educational research*.

Gives returns in answer to two questions: 1. Have you a salary schedule for teachers? 2. Do you favor personally the plan of fixing each teacher's salary on an individual merit basis? If so, what method would you suggest for determining each teacher's salary? Concludes that opinion favors a merit system and that present practice gives some attention to merit.

Dawson, Edgar. Preparation of teachers of the social studies for the secondary schools. Washington, D. C., Government printing office, 1922. 24 p. (U. S. Bureau of education. Bulletin, 1922, no. 3.)

Need of training in social studies in high schools discussed; necessity for trained teachers in the subject. Inquiry sent to large number of colleges and universities training teachers for secondary schools as to special training for teachers of social studies. One hundred of the fullest and most definite replies were selected for statistical examination. Gives questionnaire sent to leading educators in various parts of the country concerning certificates for teachers of social studies in high school. Contains a description of special training in the State university of California.

Deffenbaugh, W. S. Salaries of administrative officers and their assistants in school systems of 25,000 inhabitants or more. Washington, D. C., Government printing office, 1921. 38 p. (U. S. Bureau of education. Bulletin, 1921, no. 30.)

Study based upon questionnaire sent to superintendents of cities of the size indicated. Gives salaries, by cities, of superintendent, assistant superintendents, supervisors of special subjects, business and clerical force; analysis of salaries by maximum, median, minimum; salaries in detail for cities of over 100,000 population.

Dickson, Virgil E., and Martens, Elise H. Training teachers for mental testing in Oakland, Calif. Journal of educational research, 7: 100-8, February, 1923.

With 23 examiners after six months training a gain of 27.4 per cent in accuracy in correcting was made. A degree of absolute accuracy of 90 per cent was reached in the second 10 tests submitted after certification. A preliminary course of instruction on the use of the individual mental test plus a sufficient amount of carefully supervised experience appears to be necessary for the attainment of the most satisfactory results.

Douglass, Aubrey A. The market for prospective high-school teachers. School and society, 13: 602-6, May 21, 1921.

Presents data for the state of Washington showing subject combinations required of teachers in high schools of the state and experience of teachers in small and large high schools.

Garner, Samuel G. Tendencies in supervised practice teaching for special teachers of agriculture. Master's thesis, George Peabody college for teachers. 1923.

This study is based on a questionnaire sent to institutions in each of the 48 states. Fifty of 62 were returned. The study undertakes to outline current practice with reference to practice teaching in training teachers of agriculture.

Goff, James L. Secondary teacher training. Master's thesis, Indiana university. 1922.

Greenan, John T. The teachers' school week. School review, 30: 592-98, October, 1922.

Analyzes distribution of teachers' time in East Orange high school into time devoted to teaching, clerical work, student advisory work, and disciplinary work. Finds 70.6 per cent of time given to teaching, and that teachers are required to do too much nonteaching work.

Groves, John W. Distribution of the time of high-school teachers in California, and relationships existing between factors of service and compensation. Master's thesis, University of California. May, 1923.

Hayes, S. P. A manual for the guidance of teachers in making self-surveys in schools for the blind. Publication of the Pennsylvania institution for the instruction of the blind, Overbrook, Pa.

Tests transposed to embossed sheets for the blind. Contents: Standardized educational tests--arithmetic, American history, English composition, English vocabulary, geography, silent reading, spelling, sentence composition, and rate of writing. Intelligence tests: Pressley group point scale; Pressley cross out tests. Embossed material necessary obtained in American Braille and New York point through the American printing house for the blind.

Hinson, Murphy Roy. The relation of the salaries of the teachers in the four-year high schools of Florida to their sex, training, age, experience, and tenure. Master's thesis, George Peabody college for teachers. 1925.

A statistical study by total, partial, and multiple correlations and partial regressions of the relationship between age, sex, training, experience, tenure, and salary.

Hutson, Percival W. Training of the high-school teachers of Minnesota. University of Minnesota. Bulletin no. 46, December 10, 1923.

A survey based on questionnaire returns from 1,134 teachers and 125 superintendents and principals of Minnesota. Chapter headings are: The teacher's program; special preparation for the subjects taught; general academic training of the high school teacher; training in professional subjects; summary of findings.

Leiper, M. A. A study of the training of teachers of English in Kentucky high schools. Peabody journal of education, 3: 26-31, July, 1925.

Reports on the extent of training in academic and professional courses of 166 English teachers of Kentucky.

McCuistion, Edward. What are the educational qualifications of Arkansas high school teachers? Master's thesis, George Peabody college for teachers, 1922.

A study of the facts regarding the educational attainment of high school teachers of Arkansas, and measures the teachers in accordance with certain authoritative standards. Recommendations for improving standards.

McDonald, J. Daley. Adequate preparation for the teacher of biological sciences in secondary schools. Master's thesis, University of California, December, 1921.

Madsen, I. N. High-school teachers take Army tests. Educational administration and supervision, 6: 51-3, January, 1920.

Reports scores made by Omaha, Nebr., high school teachers on Army alpha test.

Mitchell, B. F. An analysis of the working day of 148 Louisiana high-school teachers. Master's thesis, George Peabody college for teachers, 1924.

A questionnaire study of 60 high schools. Shows how the teacher's time is actually spent.

Nanninga, S. P. Teacher failures in high school. School and society, 19: 79-82, January 19, 1924.

Reports the results of a questionnaire study which secured returns from 79 cities in Washington, Oregon, Kansas, and Nebraska concerning teacher failures. Studies by subject taught, years of experience, and sex, the percentage of teachers failing to the extent that dismissal or resignation was necessary. A ranking of reasons for failure as given by administrators is made.

Nelson, Thomas Lothian. Professional requirements for certification of secondary teachers in the United States; with special emphasis on teachers' estimates of the value of certain professional courses. Master's thesis, University of California, June, 1925.

Newcomb, R. S. The present status of the training of high-school teachers in normal schools and teachers' colleges. School review, 31: 380-87, May, 1923.

Reports on a questionnaire study which secured returns from 126 institutions in 45 states showing the practice of maintaining training schools, professional courses offered, and types of institutions that are training high-school teachers.

Nohe, Mathew F. Factors influencing teachers' salaries in Utah high schools. Master's thesis, University of Utah, 1925.

A study of salaries in comparison with per capita wealth, training and experience of teachers, and other factors.

Reavis, William C. The determination of professional curriculums for the training of teachers for secondary schools. School review, 32: 27-35, January, 1924.

Presents data from 30 teacher-training institutions showing professional courses offered. Also shows the distribution of the professional courses taken by thirty 1922 graduates of four-year teacher-training institutions.

Riemer, G. C. L. The preparation of high-school teachers in the state of Pennsylvania. Educational administration and supervision, 8: 143-65, March, 1922.

Analyzes data on professional preparation of high-school teachers of Pennsylvania.

Smith, Harry P. The salary schedule of the Lawrence, Kans., public schools; its operation and effect. Educational administration and supervision, 10: 524-32, November, 1924.

Starr, Gordon George. A study of the training, experience, tenure, and salary of the teachers of Ohio. Master's thesis, Ohio state university. 1923.

Gives data on training, experience, tenure and salaries of teachers in 160 cities and villages of Ohio; 1,893 high-school teachers are studied separately.

Strayer, George D. The salary situation in the United States as shown by reports from 392 city and county superintendents. In National education association. Journal of proceedings and addresses, 58: 543, 1920.

A general survey on the basis of statistical materials of the salary situation in 1919.

Starr, Margaret. The relation between the subjects taught and the training of California high-school teachers. Master's thesis, University of California. May, 1923.

Thompson, Mary Penn. The present status of Latin teachers in Tennessee. Master's thesis, George Peabody college for teachers. 1923.

This report is concerned with the conditions surrounding the teaching of Latin in Tennessee. The study is based largely on questionnaires of the classical investigation. The declining interest in Latin is explained.

Thorndike, Edward L. The interests of teachers in studies during their high-school courses. School and society, 17: 419-20, April 14, 1923.

Ratings were made by advanced students and teachers of their interests in high-school subjects when they were in their "teens." These ratings were mostly on English composition, history, algebra, geometry, Latin, and science.

Whitcraft, L. H. The professional training of high-school teachers. School review, 32: 218-23, March, 1924.

Reports of a catalogue study of 179 institutions of higher learning in the territory of the North central association showing state requirements for certification, requirements of institutions in professional courses for high-school teachers, courses in education offered, and average number of semester hours required per institution in specified education courses.

Woody, Clifford. Number of subjects taught by graduates of the University of Michigan who began teaching in the 1922-23 school year, and the amount of academic preparation in the subjects taught. Journal of educational administration and supervision, 10: 368-84, September, 1924.

— (Chairman). Report of the committee on salaries of Michigan teachers. In Michigan state teachers association, Lansing, Mich. Bulletin no. 1, 1923, p. 1-70.

— Report of the committee on salaries of Michigan teachers. In Michigan state teachers association, Lansing, Mich. Bulletin no. 5, February, 1925, p. 137.

— Rural teachers' salaries in Michigan. Report of the committee on salaries of Michigan teachers. In Michigan state teachers association, Lansing, Mich. Bulletin no. 5, February, 1925, p. 35.

TESTS

Abbott, Allan, and Trabue, M. B. A measure of ability to judge poetry. *Teachers college record*, 22: 101-26, March, 1921.

Describes a test adapted to use in elementary schools, high schools, and colleges of ability to judge poetry.

Ashbaugh, Ernest J. The measurement of language; what is measured and its significance. *Journal of educational research*, 6: 32-39, June, 1921.

The study analyzes the trend of effort to measure language abilities through standard tests.

Baker, Harry J. Mental tests as an aid in the analysis of mental constitution. *Journal of applied psychology*, December, 1922, p. 349.

To what extent can a useful diagnosis of mental constitution be effected by means of mental tests? Fifty subjects studied selected from Ann Arbor high school and eighth grade and from University of Michigan. Tables with ages, sex, grades, etc., given. Twenty-six tests given requiring 6-8 hours per individual. Correlations and analysis of results. Case histories. Concludes that tests for general intelligence measure all-round mental ability; tests for specific abilities are essential for analysis of mental constitution.

Bell, J. Carleton. Group tests of intelligence: An annotated list. *Journal of educational psychology*, 12: 103, February, 1921.

A list of group tests with explanatory notes.

Breed, Frederick Stephen, and Breslich, Ernst Rudolph. Intelligence tests and the classification of pupils. *School review*, 30: 57-66, 210-26, January and March, 1922.

A study in two parts. Part 1 deals with the reliability of intelligence tests as a basis for determining the intelligence of high-school pupils. Tests used—Chicago group intelligence test, Form A; Otis group intelligence test, Adv. examination Form A; and Terman group test of mental ability. Concludes that the Otis test is the most reliable for high-school freshmen. Part 2 discusses the reliability of intelligence tests as the basis for predicting the educational achievement of pupils. Intelligence is only one of a number of important factors in educational achievement. Outlines the method and results of a study organized to determine the reliability of intelligence tests as a basis for classifying high-school pupils in mathematics.

Briggs, Thomas H. Certain tests in first-term Latin. *Classical weekly*, 16: 161-62.

— A dictionary test. *Teachers college record*, 24: 355-65, September, 1923.

Analyzes the knowledge and skills essential for intelligent and facile use of the dictionary, and offers a test calculated to measure a pupil's ability to secure information from a dictionary.

— An English form test. *Teachers college record*, 22: 1-11, January, 1921.

Describes the Briggs English form test designed to test ability to use correctly the initial capital, the terminal interrogation point, the capital for a proper noun or adjective, the detection and correction of a run-on sentence, the apostrophe of possession and the comma before but coordinating the members of a compound sentence.

— English composition scales in use. *Teachers college record*, 23: 423-52, November, 1922.

Outlines a method of constructing general merit scales for the measurement of English composition, sets up scale values for passing marks for grades 7 to 12, inclusive, introduces evidence from 61 schools to show standards for passing, maximum effectiveness of written composition in each year, and agreement of teachers' standards.

Briggs, Thomas H. Prognosis tests of ability to learn foreign languages. *Journal of educational research*, 6: 386-93, December, 1922.

A discussion of the development and use of tests as a basis for predicting ability in the study of a foreign language.

— Results of the Bell chemistry test. *Journal of educational psychology*, 11: 224-28, April, 1920.

A very brief report on this test is given. The scoring sheet by Payne is appended.

Brown, Clara M. Investigations concerning the Murdoch sewing scale. *Teachers college record*, 23: 459-70, November, 1922.

Outlines a method of testing the validity of the Murdoch sewing scale. Concludes that the scale is valid as an objective measure of hand sewing and offers speed and skill norms for grades six to the second year of college. Finds that the scale has reliable prophetic value.

Byrne, Lee. Using homemade tests in high schools. *School review*, 30: 536-46, September, 1922.

Discusses tests which have been employed in the high schools of Dallas, Tex. Not standardized. Tests in third semester algebra; fourth semester algebra; last semester plane geometry; first semester Latin; sixth semester Latin; second semester history.

Camp, Harold L. Scales for measuring results of physics teaching. *Journal of educational research*, 5: 400-4, May, 1922.

A test devised for testing students in high-school physics—mechanics, heat, and electricity. The exercises were arranged in 47 different preliminary tests of 9 or 10 exercises each. The correct solutions of these exercises were attempted by about 3,000 boys and girls in 129 of the best high schools in Iowa.

Chapman, J. Crosby. A group intelligence examination without prepared blanks. *Journal of educational research*, 2: 777-86, December, 1920.

Describes a tolerably accurate instrument devised to meet conditions for upper grades and high school. The tests, scoring, validity, and advantages and disadvantages are discussed.

Charters, W. W. Constructing a language and grammar scale. *Journal of educational research*, 1: 249-57, April, 1920.

This article includes a form for testing and instructions on giving, time limit, weighting, scoring, and use of the test.

Clark, Edna Angeline. The significance of intelligence tests in the placement of stenographers. Master's thesis, University of California. May, 1923.

Clark, John Anthony. An English test for critical ability of high school and college students. Master's thesis, University of Wisconsin. 1924.

Coats, Roscoe J. Standardized tests in physics. Master's thesis, University of Wisconsin. 1921.

Colvin, Stephen S. Some recent results obtained from the Otis group intelligence scale. *Journal of educational research*, 3: 1-12, January, 1921.

Otis group tests given to 2,588 pupils in Massachusetts and Rhode Island. The tests serve a useful purpose in determining the comparative intelligence of school children and their prognostic value is reasonably high, but are quite misleading as measures of absolute intelligence. I. Q's. and coefficients of brightness based on results obtained and interpreted in terms of the standards so far published by Otis are of little value. The Otis norms must be revised before they can be accepted without correction.

Coxen, James Reason. Tests of knowledge of mechanical drawing among first-year high-school students. Master's thesis, University of Wisconsin. 1920.

Dalman, Murray A. Hurdles, a series of calibrated objective tests in first-year algebra. *Journal of educational research*, 1: 47-62, January, 1920.

A scheme for teaching first-year algebra by means of uniform graded tests given at intervals during the year which mechanically divide a class into groups.

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Haggerty, M. E. Rural school survey of New York state. *Journal of educational psychology*, 14: 257-77, May, 1923.

Presents a revised table of age norms for the Haggerty intelligence examination, Delta 2. Discussion, methods and tables.

— Rural school survey of New York state. Ithaca, N. Y., 1922. 223 p.

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Harlan, Chas. L. Educational measurement in the field of history. *Journal of educational research*, 2: 849-53, December, 1920.

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Harris, Eleanora, and Breed, Frederick S. Comparative validity of the Hotz scales and the Rugg-Clark tests in algebra. *Journal of educational research*, 6: 393-411, December, 1922.

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Hayes, Seth. Cooperative chemistry tests. *Journal of educational research*, 4: 109-20, September, 1921.

A test with questions and answers devised for simple answers. Results given of 581 first semester and 268 second semester pupils.

Henmon, V. A. C. The measurement of intelligence. *School and society*, 13: 151-58, February 5, 1921.

An address of the vice president of the American association for the advancement of science, Chicago, 1920. Results of a questionnaire to colleges and universities sent out by the U. S. Bureau of education, etc., and concludes that a radical change is needed in the teacher's function from that of a trainer to that of a diagnostician and director.

— Some limitations of educational tests. *Journal of educational research*, 7: 185-98, March, 1923.

History tests given to two senior groups in Stevens Point high school, Wis., with correlations. Algebra tests given to 100 first-year pupils in an Omaha high school, with correlations. Reading tests and discussion. Concludes that ultimately these tests will be valuable, but doubts whether we can legitimately and safely claim to measure educational products with sufficient accuracy to go much beyond the comparison of schools and classes.

— Standardized vocabulary and sentence tests in French. *Journal of educational research*, 3: 81-105, February, 1921.

Tests for measuring (1) scope and accuracy of vocabulary and (2) difficulty of sentences that are understood or can be translated into English. A standard French vocabulary of 448 words is given and pupils in 10 schools in 6 States were tested. Also sentence tests were devised and used, and results given. The scores are reliable for the 1 and 2 year pupils, but less so for the 1½ and 3 year pupils.

Hobbs, James B. Results from giving the Hotz first-year algebra scale tests to a six-eight months' group. *School and society*, 12: 353-54, October 16, 1920.

Reports on a group of 47 boys and 1 girl in Moses Brown school, Providence, R. I. Concludes that the results of the tests will be influenced by the order of study of subject matter; median number of problems done may be expected to be higher than the Hotz median; scale gives accurate estimate of ability in algebra, but not general ability.

Hudelson, Earl, and others. Sixteen spelling scales standardized in sentences for secondary schools. *Teachers college record*, 21: 337-91, September, 1920.

Describes method of standardization and reliability of 16 spelling guides. Also reproduces the scales.

Indiana university. Bureau of cooperative research. First revision of bibliography of educational measurements. Indiana university, School of education. Bulletin, vol. 1, May, 1925.

An annotated bibliography of educational tests.

Jordan, Arthur Melville. Correlations of four intelligence tests with grades. *Journal of educational psychology*, 13: 419-29, October, 1922.

Four tests (Army-alpha, Terman, Otis, and Miller) given to 67 high school pupils (University of Arkansas training high school) and Army alpha given to 315 university students. Correlations computed between each of the four group tests and the total grade points of the subjects of instruction and with English, mathematics, general science, history, etc. Highest correlation 0.68.

Some results and correlations of Army alpha tests. *School and society*, 11: 354-58, March 20, 1920.

Medians of scores of freshmen in five institutions vary from 119-142. Show 0.52 correlation between Alpha and high-school records of 230 freshmen, correlation of 0.48 between Alpha and the university grades, correlation 0.54 between the fourth year high-school grades and freshmen grades, correlation of 0.687 between college grades and a combination of Alpha and fourth year high school grades, correlation of 0.667 between English and psychology; correlation of 0.37 between mechanical arts and chemistry.

The validation of intelligence tests. Parts I and II. *Journal of educational psychology*, 14: 348-66, 414-28, September and October, 1923.

Part I gives correlations of Army alpha, Terman, Miller, and Otis group tests with Stanford-Binet tests. Also correlations of test scores with age, school marks and with a learning test devised by the author. Concludes that tests have as yet a comparatively low reliability.

Part II concerns correlations obtained by other investigators. Articles have been analyzed and the results tabulated. Correlations of the four group tests (Alpha, Miller, Terman, and Otis) with mental age (S-B) are fairly high; with age are negative; with average grades about 0.47; with teachers' estimates are high; with learning test are low; with a composite of the four tests are high. Recommends that the National research council be prevailed upon to perfect a standard series of group tests suitable for testing high-school pupils and adults.

Kepner, Paul Tyler. A survey of the test movement in history. *Journal of educational research*, 7: 300-25, April, 1923.

There are 22 scales for history in secondary schools and 15 of these aim to test informational ability. Discussion, general criticism, and general value of these tests offered. The test movement is no longer on the defensive; and it is fair to assume that history tests are now approaching rather slowly a clearly defined goal.

Lincoln, Edward A. The effects of native intelligence upon scores in standard tests. *School and society*, 12: 441-44, November, 6, 1920.

Purpose is to present evidence against the theory that no allowances need be made for differences in native abilities of pupils taking standard tests. Presents the results of a survey in which intelligence examinations were used in connection with standard achievement tests, and shows how the results of the latter were probably affected by the native abilities of the different classes.

MacGillivray, Malcolm E. Diagnosis by the aid of tests of ability of high-school students in English. *School and society*, 20: 476-78, October 11, 1924. [Abstract.]

The scores of several traits of the high-school students of St. Charles, Ill., are given. Concludes that the English qualities must have been scored as one trait.

Madsen, I. N. Group intelligence tests as a means of prognosis in high school. *Journal of educational research*, 3: 43-52, January, 1921.

A study based on results obtained from the high schools at Madison, Wis., Rockford, Ill., and Sioux City, Iowa, and three high schools at Omaha, Nebr. Number of students tested, 7,168. Concludes: Army "average intelligence" was the lowest grade of intelligence in the high schools investigated; selection by elimination of the mentally inferior was practiced; younger students were superior mentally to older; superior parentage showed superior students; positive correlation of mentality with school marks; girls in spite of lower intelligence scores made higher school marks.

Meier, Norman C. A study of the Downey test by the method of estimates. *Journal of educational psychology*, 14: 385-95, October, 1923.

Individual tests given to 106 students of University high school, Iowa. Data and analysis of data given. Concludes: Estimates of traits judged from fairly explicit descriptions of them show indifferent correlation with scores earned in the Downey test, individual form. Absence of high positive correlation is not evidence against the validity of the test, but rather grounds for questioning the value of the test for certain traits. The test is imperfect because the traits it purports to measure are not such that people can readily understand and identify them.

Minnick, J. H. Scoring of geometry test W. *Educational administration and supervision*, 6: 500-11, December, 1920.

An exposition of the method of scoring the test with correlations.

Mohlman, Dora Keen. The attainment of pupils on certain group intelligence tests. *School and society*, 16: 359-63, September 23, 1922.

Brings together the results of testing by the National Otis, Terman, Indiana survey scale, Haggerty and Army alpha intelligence examinations. Gives median grade norms for specific cities.

Norton, N. N. The Trabue completion test as a test of English ability. Master's thesis, George Peabody college for teachers. 1921.

An attempt to determine the value of Trabue's completion test. Results of Scales A & B correlated with results from Monroe's reading tests, Harvard-Newton composition scale, and Hillegas composition scales. Concludes that Trabue scales are of questionable value.

Odell, Charles W. Educational tests for use in high schools, revised. University of Illinois. Educational research circular no. 34, May 11, 1925.

Discusses the use of tests in high schools and describes reliable tests now available for use.

Orleans, Jacob S. Note on the permanence of algebraic abilities. *School and society*, 15: 649, June 10, 1922.

Results of three of the Hotz scales series (equation and formula problem, and graphs) used with 37 graduate students.

Pressey, Sidney Leavitt, and Pressey, Luella Winifred. The relative value of rate and comprehension scores in Monroe's silent reading test, as measures of reading ability. *School and society*, 11: 747-49, June 19, 1920.

A study of 147 seventh grade children. Correlation of 0.38 was obtained between comprehension score and teachers' ratings; 0.27 correlation of rate with estimated reading ability and 0.72 with rate scores and comprehension scores. Use was also made of the method of partial correlation.

Roberts, Alexander C. Objective measures of intelligence in relation to high school and college administration. *Educational administration and supervision*, December, 1922. p. 530-40.

Army alpha tests as a modern method of testing. American high schools prepare as inadequately for college as private schools. These tests are as accurate as teachers' marks and estimates. They can not be a substitute for high-school record, but they furnish a good supplement. Are inadequate, however, because they are designed for a military purpose. Promise and limitations of intelligence tests.

Root, W. T. Correlations between Binet tests and group tests. *Journal of educational psychology*, 13: 286-92, May, 1922.

The study gives correlations based on 600 children distributed through grades 1 to 12 for Otis group tests, Terman group tests and the Myers mentimeter tests.

Ruch, Giles M. A new test in general science. *General science quarterly*, March, 1923. p. 188.

Presents details of construction of the Ruch-Popchoc general science test; validation and description, reliability coefficients, tentative percentile norms based on 393 cases, and analysis of subject matter.

— and **Stoddard, G. D.** Comparative reliabilities of five types of objective examinations. *Journal of educational psychology*, 16: 89-105, February, 1925.

Experimental results offered for the formulation of an empirical basis for deciding the relative merits of five proposed methods of objective examinations. Five hundred sixty-two seniors of 24 Iowa high schools tested.

Schorling, R. Schorling-Sanford achievement test in plane geometry, together with manual of directions of norms. Columbia university. Bureau of publications.

Sims, Carl C. A diagnostic Latin test for first and second year pupils. Master's thesis, George Peabody college for teachers. 1922.

Practical suggestions for teaching Latin. A test consisting of two forms of equal difficulty. Each form consists of: 1. A derivation test of 15 words; 2. Ten sentences; 3. A 20 word vocabulary test; 4. A principal parts test of 15 words; 5. A case ending test of 15 words. Standardized on 753 cases.

Smith, William Hawley. The Otis group intelligence tests and high-school grades. *School and society*, 12: 71-2, July 17, 1920.

Reports on the question of the relation of the coefficient of brightness to the score obtained in high-school subjects.

Thorndike, Edward L. Intelligence examinations for college entrance. *Journal of educational research*, 1: 329-37, May, 1920.

Deals with the significance of these tests, the continued significance, comparability of standards, and results, improvement of the examination and correlations of various forms of group tests on 33 college students.

Thorndike, Edward L. On the new plan of admitting students at Columbia university. *Journal of educational research*, 4: 95-101, September, 1921.

A paper on the method of admitting students by tests

Tillinghast, Charles C. Bibliography of tests for use in high schools. *Teachers college record*, 23: 375-95, September, 1922.

Offers a list of intelligence and educational tests suitable for high-school use. Contains excellent descriptions of tests which were available up to date of publication of bibliography.

Trabue, M. R., and Viele, Ada. Educational test service. *High school journal*, 7: 143-46, 156-57, November, 1924.

List of test materials distributed by the Bureau of educational research, with authors and prices.

Van Wagenen, M. J. The Minnesota English composition scales, their derivation and validity. *Educational administration and supervision*, 7: 481-99, December, 1921.

One hundred teachers of English in Minnesota assisted in this investigation. Evaluation of thought content, sentence and paragraph structure, and mechanical perfection. Plan of construction of three sets of English composition scales which possess a marked degree of stability. They are designed to make possible the measurement, not of general merit, but of certain specific qualities.

Weeks, Angelina L. Terman vocabulary as a group test. *Journal of educational psychology*, 12: 532-36, December, 1921.

The test given individually and as a group test to the same pupils in two private schools, one a girls' school, secondary, and the other a grade school. The correlation was 0.74 which is sufficient to warrant the use of the group method of vocabulary testing in secondary schools.

Wentworth, Mary M. Army alpha tests and teachers' estimates in Hollywood high school (Calif.). *School and society*, 12: 58-60, July 10, 1920.

A study of 211 seniors based on (a) teachers' estimates, (b) Army alpha tests, (c) average of grades, and (d) correlations. Teachers' estimates do not seem to be a fair basis for recommendation or non-recommendation for college. A reliable test is better.

West, Roscoe L. An experiment with the Otis group intelligence scale in the Needham, Mass., high school. *Journal of educational research*, 3: 261-68, April, 1921.

The test given to 173 high-school pupils with results and tables. Finds a high correlation between Forms A & B of the Otis scale; Otis test and teachers' marks; youngest pupils make best records; considerable gain was produced by using the tests with 22 pupils to bring their work up to a standard nearer that shown by the results of the intelligence test.

Whipple, G. M. An annotated list of group intelligence tests. *Twenty-first year book of the National society for the study of education*, Bloomington, Ill., 1922, p. 93.

A list of group tests suitable for high schools giving nature of tests, range of ages or grades, time required, publisher, price and references.

Whitman, Esther C. A brief test series for manual dexterity. *Journal of educational psychology*, 16: 118-23, February, 1925.

An attempt to standardize a test series governed by manual dexterity. Five hundred and four school children of Walpole, Mass., tested including 66 high-school pupils. Test composed of seven items which take 12-15 minutes to give. Material, instructions, and scoring described. Tests include: Pegboards, nuts, bolts, adjusto tray, etc.

Willson, G. M. .Standard derivations of age scores and quotients in typical groups. Journal of educational psychology, 16: 193-207. March, 1925.

Alms to indicate the need for more definite knowledge of the standard deviations of mental ages, educational ages, and I. Q's in typical age and grade groups, and to suggest problems which arise in the course of the collection of such sigmas. Conclusions.

Wylie, Andrew Tennant. A brief history of mental tests. Teachers college record, 23: 19-33. January, 1922.

Brings together in a concise statement the history of the development of various types of mental tests.

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